Kei hea te tangi a te Tūī? An exploration of Kaitiakitanga in urban spaces.

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Erana Walker

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Abstract

Indigenous people's connection to the natural world differs from place to place. In Aotearoa, New Zealand, Māori connection to nature is often articulated through the concept of kaitiakitanga whilst intertwining concepts of whakapapa, wairua, mana, mauri and place. Kaitiakitanga captures the relationships, narratives and practices that Māori utilise to protect kin of the natural environment as well as Māori communities in general. Over recent decades increase use of kaitiakitanga with respect to resource management has been linked to ideas of guardianship and stewardship, departing from important aspects such as place, whakapapa, intergenerational knowledge, spirituality and resource use. Calls to recognise the diverse ways kaitiakitanga has and can be expressed by Māori have echoed through academic literature, encouraging wider perspectives and application of the concept to develop. This has reinvigorated not only the need for natures protection but also the recognition of cultural knowledges and concepts in practicing kaitiakitanga.

As with most indigenous people, Māori have experienced urbanisation that has spanned across generations of whānau and hapū. Urbanisation has the ability to challenge health outcomes, cultural practices and cultural knowledge, and more importantly, relationships to nature. Growing urbanisation and environmental degradation continue to challenge people and our relationships to nature. There is now a need to understand how urban spaces may also challenge the concepts that encourage connections to nature like kaitiakitanga. Moreover, there is a need to understand if such cultural concepts can become challenged when transient Māori reside in another tribal group's boundaries. This research provides a deeper analysis of kaitiakitanga by understanding its application within the urban space of Kirikiriroa/Hamilton. From data gathered through a survey, focus groups and interviews, this research project illustrates the experiences of Māori in the urban space who know and practice kaitiakitanga in Kirikiriroa/Hamilton. More importantly, this study posits the integral role of place connection and mana in supporting and shaping kaitiakitanga practices in urban spaces.

The data from participants shows a clear narrative of kaitiakitanga from both local and transient Māori exist and indicates that kaitiakitanga is practiced in accordance with their location and whakapapa to their area of residence. The study has found that kaitiakitanga practices have adapted to suit urban spaces allowing for both transient and local knowledges to exist within the urban space. The key findings of this research show many influences that impact kaitiakitanga practices like the recognition of childhood spaces and experiences, ideas of kinship, cultural knowledges, spirituality, mobility, nature as well as modernisation. Through exploring participants use and knowledge of kaitiakitanga, this research provides a new lens in which to view this concept and bring to the fore, the various experiences and ways that participants connect to place, people, culture and most importantly, nature.

Key words: Kaitiakitanga, urbanisation, Indigenous people, Māori, cultural practice, cultural knowledge, nature, nature connection, nature and Indigenous people, urban nature, urban experience, place-based knowledge.

Mihi

Ka piki taku manu, ka hoka taku manu, ka rere ki Te Taitokerau, ki ngā whenua taurikura o ōku tūpuna. Tau atu ana ki ngā oneone o Te Parawhau, ki ngā au hāro o Whangārei Terenga Paraoa. Tēnei te reo kōingo o tō mokopuna e manakō ana mō te āhuru o te kāinga. Tēnei au ka noho, ka pupū ake a mahara mō koutou kua riro ki tua o te kūaha o te pō. E tangi tīkapa ana te ngākau mō koutou kua whetūrangitia, koutou tē kite i tēnei ao kikokiko. E Mum, Nan, Grandpa, Poppa, koutou katoa i whakapono ki au, ki tā mātou whānau. Haere koutou i runga i te mōhio, e ora ana o koutou ōhaki, o koutou wawata mō mātou kua mahue iho nei. Ka piki taku manu, ka hoka taku manu, ka rere whakatetonga, ki ngā wai korio o Waikato, ki ngā whenua taurikura o tōku tūpuna a Reipae. Tēnei a mihi e rere ana ki ngā hapū, ngā iwi, ngā maunga, ngā awa e whakaruruhau ana i tēnei uri o Te Taitokerau.

Kei aku nui, koutou i whai wā ki tēnei mahi rangahau. Koutou te hunga kei ngā tōpito katoa o Aotearoa. Koutou te hunga i koha mai i ō mōhiotanga, i ō wheako mō te kaitiakitanga. Nā o koutou purapura kōrero, kua puāwai te māramatanga i roto i au mō tēnei mea te kaitiakitanga. Mei kore ake ko koutou, ka kore pea e ea tēnei mahi rangahau ā tātou. Nō reira, e koutou i taunaki i tēnei mahi rangahau, e kōmanawa ana te puna mihi kia koutou katoa.

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Nō reira, e aku nui, tēnā rā koutou katoa,

He iti nā te aroha

Erana

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Glossary of Terms

Ahi kā	Home fires
Aotearoa	New Zealand
Atua	God, Gods
Awa	River
Haka	To dance, Māori dance
Hapū	Subtribe, to be pregnant
Haukāinga	Host community
Haumīētiketike	God of uncultivated foods
Hihiri	Form of energy
Hineahuone	First woman formed from sand
Hinetītama	Maiden of Dawn
Huahua	Birds preserved in their own fat
Hui	Meeting or gathering
Io matua te kore	Name given to the Supreme being
Iriiri	To baptise
Kai	Food
Kai Tahu	Māori South Island tribe of New Zealand
Kaimoana	Sea food
Kaitiaki	Protector, guardian, minder, caregiver
Karakia	Prayer, ritual, chant
Karanga	To call
Karani mā	Grandmother
Kaumātua	Elderly, old person, elderly man
Kaupapa	Subject, topic, matter for discussion
Kīngitanga	Māori king movement
Kirikiriroa	Used in this thesis to describe Hamilton City
Koha	Gift, offering, contribution
Kōhanga reo	Māori language preschool
Kōrero	To converse, discussion
Kōrero tuku iho	Generational knowledge
Kōroua	Elderly man
Kotahitanga	Unity
Kuia	Elderly woman
Kupu	Word
Kura	School
Maara/māra/māra kai	Garden, Food Garden
Mārā hūpara	Māori playground
Mana	Authority, prestige, power, influence, status
Manaakitanga	Hospitable, act of caring
Manuhiri	Visitor
Māori	Indigenous people of New Zealand
Marae	Complex of buildings, front courtyard of a meeting house
Matakohe	Island in the Whangārei harbour
Matariki	Star constellation
Mātauranga Māori	Māori Knowledge
Mātāwaka	People who are distant from their tribal areas
Maunga	Mountain
Mauri	Life force
Mirimiri	Māori massage
Mokopuna	Grandchild, Grandchildren
Mōtu-ā-taua	Island in the Whangārei harbour
Ngāhere	Forest
Ngāpuhi	Northern Māori tribe of New Zealand
Ngāti Kahu	Northern Māori tribe of New Zealand
Ngāti Pareraukawa	Subtribe of Ngāti Raukawa

Noa	To remove the restriction of Tapu
Ōmāpere	Lake in the northern part of New Zealand
Onemāmā	Coastal area in Whangārei
Otaika	Suburb of Whangārei
Pā	Fortified village
Pākauhōkio	Pā site in Whangārei
Pākehā	New Zealand European
Panguru	Location in the Northern parts of New Zealand
Papakāinga	Home base, original home, communal land
Papatūānuku	Earth mother
Paru	Dirt
Pepeha	Māori expression of location
Pōhiri	Welcoming process
Pūrākau	Story
Purapura	Seed
Rangatahi	Youth, young people
Rangatira	Chief, leader
Rangatiratanga	Chieftainship, right to exercise authority
Ranginui	Sky father
Raupatu	Confiscation
Rāwaho	Outsider
Rohe	Region, boundaries
Rongomātāne	God of kūmara and cultivated foods
Taiao	Environment
Taiāpure	Coastal reserve for resource gathering
Tainui	People from the Waikato area, an ancestral canoe
Tamariki	Children
Tānemahuta	God of forest and birds
Tangaroa	God of the fish and sea
Tangata	People, human beings
Tangihanga	Funeral
Taonga	Ancestral treasures
Tapu	To place a restriction, restricted
Tapuwae	Footprint, tread
Taungawaka	Person distant from their tribe
Taurahere	Person distant from their tribe
Tāwhirimātea	God of the winds
Te Ao Māori	The Māori world
Te Ao Mārama	The world of light
Te Awa Tupua	Description of a river in New Zealand
Te Reo	The language
Te Taitokerau	The Northern district of New Zealand
Te Urewera	Ancestral home of the Tuhoe tribe
Te whei/whai ao	The world
Tēina	Younger sibling
Tikanga	Māori custom, lore, rule
Tino Rangatiratanga	Sovereignty, autonomy
Tīpuna/Tūpuna	Ancestor
Tohi	Bless
Tohunga	Expert, skilled person
Tuākana	Older sister or brother
Tuku iho	To give, given from an older person
Tūmatauenga	God of war and strategy
Tūranga	Position, situation, foundation, stand
Tūrangawaewae	Standing place, home
Uri	Descendants
Wāhi tapu	Scared place

Waiata	Song
Waikato	Central district of New Zealand, name of a river
Wairua	Spirit
Waitaua	Name of river
Waka	Canoe, boat, vehicle
Wānanga	Discuss, deliberate, consider
Weriweri	Horrible, scared, unpleasant
Whaikōrero	Oratory
Whakapapa	Genealogy
Whakataukī	Proverb
Whakawhanaungatanga	Establishment of relationships
Whakawhiti Kōrero	To discuss, share thoughts
Whānau	Family
Whanaungatanga	Relationship
Whanga-ā-reipae	City, see also Whangārei
Whāngai	To adopt
Whangārei	City within the Northland district of New Zealand
Whare tangata	Womb
Whenua	Land, afterbirth

Chapter 1 - Introduction

"There is a well-known aphorism that says Māori walk backwards into the future...they take the past with them in advancing into the unknown."

(Kawharu, 2010, p.222).

1.1 Introduction

Storytelling is used in indigenous cultures to preserve, protect and transmit knowledges (Di Giminiani, 2016; Moewaka-Barnes et al., 2018). For Māori as well as many indigenous communities, storytelling weaves together narratives of landscapes, people, culture and place to protect values, concepts, practices and knowledge for current and future generations (Ka'ai & Higgins, 2004; Moewaka-Barnes et al., 2018). The importance of storytelling is essential in ensuring Māori experiences and understanding of the world are shared widely throughout communities and knowledge systems are claimed by future generations. The recognition and use of indigenous experiences through storytelling must be incorporated in oral forms but also in written text. For this reason, beginning this piece of research with my own story is not only fitting but also provides the foundations for how this piece of research came to be. The use of storytelling has helped to shape this thesis by sharing narratives, reflections, experiences of participants and my own position in this research that explores kaitiakitanga knowledge and practice in urban spaces of Aotearoa. I draw on the quote shared in the outset of this chapter by Merata Kawharu (2010) about using the past as a foundation for directing future actions and the art of storytelling to share my narrative of place in shaping this research project. I assert here in the beginning of this thesis, the need to recognise our historic and current experiences to shape

research projects but to further support the development of knowledge. The overall aim of this chapter is to introduce the reader to the makings of this research project. A glossary of terms is attached in the outset of this thesis for the reader's benefit.

1.2 A Narrative of Place

I grew up in Whangārei surrounded by my whānau, in the warmth of our whānau homestead in Otaika Valley. Our whare is located on the outskirts of the Whangārei township on ancestral land passed down through generations before me, down to my grandmother and now sits in the care of my immediate family. This land embodies the wisdom, thoughts and experiences of my tūpuna which are embedded in the stories and narratives passed on to us, their uri. These narratives of Otaika as well as surrounding areas and landscapes like Manaia, Te Whanga-ā-Reipae, Matakohe, Motu-ā-Taua, Onemāmā, Pākauhōkio and other sites of significance house the experiences, stories and knowledges of our tūpuna and our wider hapū. The narratives associated with these areas have helped to provide meaning for our occupation by acting as reminders of our roles as kaitiaki of these forms of mātauranga and the places in which they are embedded.

Our house in Otaika was very humble, like generations before us we sourced our water from a spring near our house and captured water in our tanks from the rain. Far from town and off the grid, we had no connection to electricity and even when it became available chose not to connect to the main grid, and so relied on many generators, solar panels and batteries over time to provide lights and electricity to our whare. If we were lucky, we could watch one of the many DVD's we had collected over the years as there was no real way to view national programmes on our television. Our weekends were spent singing songs from kura, building huts outside, walking down to Otaika awa, exploring the small ngahere behind our house,

watching my mischievous teina, laughing, fighting, sharing kai, sharing stories and learning about the place we call home. Our whare was built in the early 1900's and has seen the joy, comfort, grief and challenges of my father's generation and generations before him. The homestead has housed and fed many of my aunties, uncles, cousins, nieces, and nephews. All of whom were taught the value of togetherness and connection to the whenua. These experiences of my wider whānau have provided lessons, guidance and knowledge for us to use in the navigation of our daily lives.

This humble life taught me a lot about the natural world but the connection to our sense of place was the most valuable lesson for me. I reflect on the drive of both my father and wider whānau in preserving our land and protecting it for future generations. I distinctly remember the hui, debates and continued tension faced in order to protect the whenua that supports our flourishment as a whānau from being developed or sold for profit. Our connection to this land, to this place, informs our identity as a whānau and allows us to develop our sense of self in a safe environment. This opportunity to occupy meaningful spaces and develop both a physical and spiritual sense of well-being is what contributes to our role as kaitiaki of this place. I often think that this place, our home and the bond I share with it, ties me to the past and the future generations of my whānau. It is an ongoing struggle to maintain our sense of connection to our lands as more modernised ways of living become prominent in our rural spaces. However, our stories embedded in this place continue to remind us of our obligation to past, present and future generations.

I had the privilege of attending a Māori immersion school when I lived in Whangārei. During this time I was taught values and principles of the Māori world, narratives of our Māori gods and local stories of tūpuna. The knowledge that was

passed on to me through this kura broaden my understanding about the wider body of knowledge that existed in the Māori world. This knowledge coupled with the knowledge from my whānau developed further, my appreciation of places like Otaika but also, how our own experiences can be integral to developing larger bodies of knowledge. Through my kura, we undertook a river restoration project on the Waitaua awa. It was through this river restoration project that I was able to draw on my own place-based knowledge and wider mātauranga to understand the importance of nature to our identity and culture. This river restoration project was the first time that I heard the word, kaitiakitanga. Initially, I had thought kaitiakitanga was used to explain sustainability as this is how the concept was prominently used while I was in school. However, throughout the restoration project and my time in kura, I came to understand and view kaitiakitanga as being more than sustainability but also encompassing knowledges and practices from generations about a particular place.

In 2010 I moved from my home in Otaika to Kirikiriroa and enrolled at the University of Waikato in the hopes of growing my understanding of environmental knowledges from around the world. It was very hard for me to leave this source of comfort, of knowing, of connecting that was developed in Whangārei and to move to Waikato; to pursue higher education. I reflect on my time in Whangārei as being instrumental in developing my understanding of the world. My connection to Whangārei encouraged me to appreciate and understand the importance of whakapapa, mana, mauri and how these aspects shape connections of whānau and hapū to our surrounding environment. In transitioning to Kirikiriroa, I had to grapple with the inaccessibility of tribal knowledge as well as the overwhelming feeling of living in a new place away from my own whānau. Challenges to maintain

connection to our homelands have been difficult and discussions about this experience have and continue to be explored in the academic space (see Haami, 2018; King, Hodgetts, Rua & Morgan, 2018). Over 80 percent of people who identify as Māori now reside in urban areas (Gagné, 2016; Kukutai, 2013; Meredith, 2015) and I was now part of this growing experience of urbanisation.

In shifting from Te Tai Tokerau to Waikato, I have had to wrestle with ideas of connection to new lands of other tribes. The move has raised questions about my identity as a Māori person living in a new tribal area and my role in facilitating connections to and with this new place. When at home in Otaika, I would never consider myself to be classed as an urban Māori person as I could lay claim to the land under my feet and the maunga within my tribal boundaries. I knew the surrounding hapū of Whangārei and our experiences in protecting our ancestral homes. I recognised the different sites of significance to our hapū and could call upon whānau to support me when in doubt about knowledges related to particular parts of Whangārei. However, since moving to Kirikiriroa in 2010, my understanding of self and identity has changed as I am simply Mātāwaka within the Waikato area (see Appendix 1 for a map of Aotearoa with the approximate locations of Whangārei and Kirikiriroa). The transition led me to think about ideas of connection in a larger sense. Tracking through our family whakapapa kōrero to find a distant connection, but a connection to the Tainui people, nonetheless. It has also allowed me to internally debate how I can contribute positively to the environment within Waikato. In moving to Kirikiriroa, I am now encouraged to learn about the different narratives about the Waikato area. My initial understanding of connection entailed the narratives of place that were important to me, now I must understand how narratives of place that are important to other tribal groups, may inform

opportunities for my own connection to place to develop. These challenges to connect and express cultural practices in new spaces have formed the foundation of this research project and reinforced within me the rationale for why this research is important.

I was fortunate to complete a Masters degree at the University of Waikato in 2016 that analysed the role of kaitiakitanga and how it is interpreted by different generations of our hapū of Te Parawhau (see Walker 2016). The journey through my Masters thesis allowed me to seek out knowledge about kaitiakitanga within my whānau and understand how such knowledge is constructed and remains useful even when generations may add or alter their practices associated with this knowledge system. My Masters journey provided a lens with which to view kaitiakitanga from a hapū perspective and brought about interesting findings about the influence of age and knowledge in how we practice kaitiakitanga. As with any piece of research, my masters brought out more questions than answers that highlighted the many angles in which kaitiakitanga can be understood and practiced.

The masters research project, my experience in transitioning to Kirikiriroa coupled with my current position in the urban space has contributed to the construction of this doctoral research project. Although I may not have the same access to knowledge as I do in Whangārei, it has further challenged me to explore and rely on familiar engagement practices with whānau and the wider Māori community to form this research project. My own experiences and the need for knowledge about kaitiakitanga has led me to ask; how do we construct, practice and understand kaitiakitanga in the urban space? Who holds this knowledge and how do they share it with their whānau, hapū and iwi? How do urban Māori who have grown up as

rural Māori apply and understand kaitiakitanga; and more importantly, what is the process for Mātāwaka in new regions to practice kaitiakitanga?

These questions highlight the many facets of kaitiakitanga that are yet to be understood and in this research project I attempt to contribute to this emerging body of knowledge. Furthermore, in this project, I critically examine how the urban space can influence our values and concepts as Māori. It would be presumptuous of me to think that this experience of moving to an urban space and being overwhelmed by changes in identity, cultural knowledge and practice to be unique to me alone. The narrative of place and transition that I have shared is only one example of the many experiences currently undertaken in the urban space by Māori. This research project provides one way to gather some of these narratives and share how Māori in urban spaces are adapting and maintaining their connection to culture and nature in new environments. These understandings provide a way for relationships between Mana Whenua and Mātāwaka groups to flourish but more importantly, highlight ways to support the maintenance and application of Māori cultural values and practices. This research project will explore ways in which we can better construct the urban space to reflect and encourage the understanding and use of our cultural values through investigation of kaitiakitanga in urban spaces.

1.3 Rationale

My experience has demonstrated that migrating from Whangārei to Waikato comes with its own set of challenges that are largely rooted within the difficulties in enacting cultural practices in new tribal boundaries. However, understanding about this emerging narrative of urban living in relation to the practices of kaitiakitanga remains limited. Obligations cemented through traditional narratives that detail the

deep connections established between tangata and taiao formulate the basis for creating relationships and practices with nature (Ka'ai & Higgins, 2004; Kawharu, 2000). This connection supports the view that Māori as with many indigenous cultures are inherently tied to the natural world (Ka'ai & Higgins, 2004). If such connections are imperative to our well-being and understanding of self as explored in literature by Watene (2016) how then is this relationship maintained in urban areas? The rationale for this research project stems from the need for better understanding of Māori experiences in urban spaces especially in relation to how we connect with nature through cultural practice. Moreover, the narrative shared in the outset of this chapter shows that there may be challenges to undertaking such practices particularly for migrant Māori people.

1.3.1 Kaitiakitanga and the Resource Management Act 1991

In Aotearoa, the inclusion of kaitiakitanga in the Resource Management Act 1991 (RMA) has encouraged the need for better partnership in decision making about resource management. The RMA enables environmental management and protection practices to mitigate negative environmental activities (Ruru, 2018). Frequently translated as guardianship, or environmental stewardship, kaitiakitanga as defined through the RMA remains contentious, as current legal definitions of kaitiakitanga de-emphasise cultural understandings of kaitiakitanga (Clarke, 2004; Ruru, 2018). Both guardianship and stewardship are limited in capturing the philosophical underpinnings of kaitiakitanga and misinterprets relationships with the environment and the important connections established through whakapapa (Kawharu, 2000; Walker, Wehi, Nelson, Beggs & Whaanga, 2019). The inadequate way the RMA discusses kaitiakitanga is further explained by Marsden and Henare (1992):

> Kaitiakitanga is defined in the Resource Management Act as guardianship and/or stewardship. Stewardship is not an appropriate definition since the original English meaning of stewardship is 'to guard someone else's property', apart from having overtones of a master-servant relationship. Ownership of property in the pre-contact period was a foreign concept. The closest idea to ownership was that of the private use of a limited number of personal things such as garments, weapons, combs. (p.15)

The thoughts shared by Marsden and Henare on the RMA's interpretation highlights the need to reclaim this concept and ensure that all aspects including its spiritual significance are expressed in how kaitiakitanga is interpreted and shared amongst wider Aotearoa society. Encouraging more narratives of kaitiakitanga to surface within academic literature will support in limiting its misuse and misinterpretation. Exploring different narratives of kaitiakitanga will provide an opportunity to see the culturally significant knowledge that exist within kaitiakitanga that may often be overlooked. More definition of kaitiakitanga can be found in Chapter 2 of this thesis.

1.3.2 Ecological Damage

Decreasing nature is seen in urban spaces as more urban areas are developed to cater for growing populations of people (Cuerrier, Turner, Gomes et al., 2015). The pressure on infrastructure and resources has meant that cities must now seek out ways to become more sustainable and utilise resources wisely (Baker, 2012; Jim, 2013). This limitation and pressure on urban nature prompts discussion about how best to care for and protect remnant urban nature. Efforts for nature restoration in urban areas have largely drawn on western ideologies to achieve restoration goals (Peters et al., 2015). Although efforts to reinvigorate nature through ecological restoration projects have been undertaken, there is limited examples that use Māori values as a basis to create such projects (Walker et al., 2019).

Given the connections between Māori and the natural world, projects that are undertaken to restore the remnants of urban nature could use kaitiakitanga as the foundation for such projects. However, doing so requires clear understanding of kaitiakitanga knowledges but also how it is currently undertaken in urban areas. Exploring current practices and knowledges of kaitiakitanga in urban spaces can provide a lens to understand the motivations of this practice and where it might support ecological restoration in urban areas.

1.3.3 Further Considerations

This research strives to understand the role of urban environments in influencing kaitiakitanga. The research will examine how our environments inform and shape our practices and knowledge, but also how we connect to these spaces through cultural knowledge and practices. Our experiences are often as varied as the environments we live in; therefore, this research project provides a platform to seek out the different ways kaitiakitanga exists within the urban space.

The Māori population sits at around 850,500 (Statistics New Zealand, 2020) with expected growth over the coming years. Most of this population are predicted to reside within the urban space and create communities that incorporate practices of both traditional and modern origin (Meredith, 2015). A growing Māori population in urban centres can require increasing need for resources, housing and support services which can subsequently alter and modernise some sites of significance in urban areas (Arthur-Worsop, 2018; Gray & Hoare, 2010). Given the changing nature of our geographical space through development and the pressure placed upon environments and ecosystems, it is important that we seek to understand the role that built environments can play in shaping our connection and application of traditional values and concepts. In short, how do we maintain connection and

belonging in an ever-changing landscape and what does this mean for Mana Whenua and Mātāwaka alike. Through data collected from urban Māori across Aotearoa and those residing in Kirikiriroa, this research brings together experiences of Māori in urban areas related to practices and knowledges of kaitiakitanga.

Historical accounts of connection can often be found in the narratives of those who challenged the western systems to reclaim land and culture. There are well documented cases of cultural protection such as Whina Copper who initiated the Māori land marches addressing years of Māori land-loss (Te Roopu Matakite, 1975), Eva Rickard who fought for the return of Te Kopua in Whaingaroa (Ministry for Culture and Heritage, 2017) and Joe Hawke who was instrumental in the return of Takaparawha/Bastion Point (Bastion Point-The Untold Story, 1999), and most recently, Pania Newton and her whānau in the return of Ihumātao (Protectors not Protestors, 2020). These documented events highlight the ongoing efforts by Māori to maintain connection to lands in both rural and urban settings. Their actions were catalyst for addressing Māori land issues but also the impacts of land displacement on Māori language, culture, knowledge, and identity.

These events brought such issues to the fore of Aotearoa societies consciousness, it also saw the re-emergence of cultural knowledge and language and highlighted the experiences of urban Māori people. As more narratives of urban Māori emerge, there is a growing need to understand how Māori engage with each other but also, how cultural knowledge and practices like kaitiakitanga now exist within urban areas. The research aims to continue the work of capturing accounts of people and place connection, and to contribute to the growing body of literature on urban Māori experiences. The research questions the role of connection, particularly for those who do not share direct whakapapa links to their surrounding environments.

1.4 Research Aims and Question

The primary aim of this research is to seek narratives from urban Māori in Kirikiriroa about their knowledge and practices of kaitiakitanga. In pursuing such narratives, the research allows a critical examination of the urban space and to question its influence on Māori cultural values. Utilising literature, a survey, focus groups and interviews, this thesis will answer two key questions:

1. How is kaitiakitanga practiced in urban Kirikiriroa?; and
2. How does mana and place influence kaitiakitanga knowledge and its application within the urban space?

These reasearch questions allow the analysis of the role of:

- Mana;
- Place;
- Kaitiakitanga;
- The urban space;
- Cultural practice and;
- Urban nature.

To explore these aspects, key aims have also been included in the data Chapters 4, 5 and 6.

1.4.1 Methods

For this research project I have used a literature review, survey, focus groups and interviews to explore kaitiakitanga practices in Kirikiriroa. More detail about these methods and the way they were conducted can be found in Chapter 3 of this thesis.

1.4.2 Participant Selection

Participants were chosen differently for each method used in this research project. A process of participant selection was created to ensure the research reached the appropriate people. This method of selection has allowed the research to gather wider perspectives on the research topic and further uses the participants data to inform and gather localised knowledge of the Kirikiriroa area. More details about the participants and the way they were selected for each data method can be found in Chapter 3.

1.4.3 Ethics

Ethics for this research project was sought from the University of Waikato through the Faculty of Māori and Indigenous Studies ethics committee. Ethics was approved for this study and the letter of approval can be found in Appendix 2 of this thesis.

1.5 Methodology

This research project seeks to understand the application of cultural practices within urban environments through exploring practices of kaitiakitanga. To ensure that this project is undertaken in a way that encourages narratives from both Mana Whenua and Mātāwaka in urban spaces, specific approaches have been used in this research project to support the expression of these narratives. As this project uses a Kaupapa Māori theoretical framework, the methodologies for this research project have been selected as a way to support respectful engagement and data collection with diverse participants. More details about the theoretical framework, the chosen methodologies and methods can be found in Chapter 3.

1.6 Contributions to the Academy

Māori voices within literature on urban experiences are emerging in the academic space but require further exploration about how we create and maintain relationships to nature in urban areas within new tribal regions. This research examines the intricacies of our cultural practices and how they shape our relationship to place and to each other. Through such relationships the research provides a lens in which to understand placemaking through the practice of kaitiakitanga. This will contribute to filling gaps within the literature space about Māori place-based practices, Māori experiences in nature as well as cultural practices and knowledge maintenance in the urban space.

1.6.1 Urban Kaitiakitanga Literature

My master's thesis highlighted the need for more shared discussion and analysis of kaitiakitanga within the academy (Walker, 2016). Although there are accounts of kaitiakitanga that explore relationships to nature (see Marsden & Henare, 1992; Selby, Moore & Mulholland, 2010), there is now a need to further explore how this practice is used and developed in urban areas. My masters research indicated that there was a need for more understanding about kaitiakitanga that explored the experiences of practitioners across ages and terrains. Therefore, this research project provides another lens in which to analyse kaitiakitanga in modern society but more importantly contributes to a growing body of literature and knowledge of kaitiakitanga.

1.6.2 Urban Māori

Literature on the experiences of urban Māori has largely focussed on the story of migration to the urban space (Gagné, 2013; Haami 2018; Tapsell, 2014; Williams, 2015). In more recent times, a growing discourse is occurring that captures the efforts of reclamation and revitalisation of culture, language and practices amongst

urban Māori communities (Gagné, 2013; Haami, 2018; King et al., 2018). The research will contribute to this area by providing dialogue on the practice of kaitiakitanga and how urban Māori groups apply such practices. The research allows a space to critically examine the interpretations and application of kaitiakitanga within urban settings and understand the influences that urban mechanisms have on the application of kaitiakitanga. More importantly, the research project provides an opportunity to glimpse into the lives of Māori in urban areas and understand how they create and maintain connection to this space.

1.6.3 Mana Whenua and Mātāwaka Relationship

A key area highlighted in literature such as Ryks, Pearson and Waa (2016), expresses the need to understand the relationship between Mana Whenua groups and Mātāwaka groups. Although Ryks et al. (2016) have provided some definition of these terms in their work, there is limited discussion about the engagement and relationships that exist between these groups, particularly in urban spaces. The research contributes to this ongoing dialogue and seeks to highlight ways that both groups are currently engaging with each other in the urban space through kaitiakitanga practices. It is hoped that through this research, we can understand how practices such as kaitiakitanga can be used as a way to guide relationships between the two groups.

1.6.4 Place and Practice

Although there are many forms of literature that discuss Māori values and the significance of land to Māori communities (see Kawharu, 2002; Mead, 2013; Selby et al., 2010), there is a need for more discourse on the role of our places in influencing our application of cultural values and concepts. Literature captured in books by Selby et al. (2010) and Kawharu (2002) highlight the important roles of

Māori cultural values in directing resource management but also the prospect to support care and protection of nature through varying mechanisms like urban planning and resource management policy. Furthermore Awatere, Rolleston and Pauling (2010) state the important role of urban design in contributing to the expression of cultural values and the opportunity to shape cities that reflect the needs of whānau, hapū and iwi. Given the growing number of Māori residing in urban spaces more understanding is needed about the establishment of place-based connection through cultural values and practices that are currently being undertaken in urban areas.

These areas show the value of this research to the academic community and more importantly to Māori communities, by supporting more narratives to surface about Māori experiences in urban areas. In addition, the research provides a way to understand how we might connect to nature in urban spaces through concepts and practices of kaitiakitanga. This may provide valuable insight for those looking to plan for urban spaces and increase the well-being of people and nature.

1.7 Thesis Conventions

This thesis has incorporated certain mechanisms that may not be conventional in the academic space. Māori words have been included in this thesis to support the recognition and use of the Māori language which aligns with the theoretical basis of this research project. Furthermore, New Zealand is referred to as Aotearoa within this thesis to further acknowledge the importance of Te Reo Māori. A glossary of terms can be found in the outset of this thesis for the readers use. Māori words have not been capitalised or italicised in this thesis; this has been done to normalise the use of Māori words in this academic piece. However, where appropriate, names of places, people, chapters, the terms Māori, Mana Whenua, Mātāwaka and key themes that are written in

the Māori language have been capitalised. The word Indigenous in Indigenous peoples has been capitalised throughout the thesis as this is common within indigenous disciplines. In addition, the name Hamilton will be referred to as Kirikiriroa within this thesis to pay homage to local hapū and the narratives and names that are important to the Kirikiriroa area. The word resource is used within this thesis to describe natural materials such as plant materials, animals, invertebrates and natural landscapes where appropriate. Although this word does not adequately capture the kinship relationships of Indigenous peoples with nature, it is used here to provide context for the reader.

This thesis intertwines narratives from the author to help initiate some chapters, particularly chapters 4,5,6 and 8. This also aligns with the methodological approach and theoretical basis of this research project. The thesis has also used key themes as a way to present the research data of this project. For this reason, the reader can expect chapters 4, 5 and 6 to include data relevant to the chosen themes. These themes captured in chapters 4, 5 and 6 are outlined as Place and Kaitiakitanga, Practice and Resources as well as People and Culture. More information about the rationale to structure the data chapters in this manner can be found in Chapter 3.

1.7.1 Thesis Structure

The following is an outline of each chapter in the thesis. The chapters have been shaped by the research methodologies and the data shared to the author by the participants of this research project.

Chapter 1: Introduction - This chapter introduces the research project by using the authors experiences of place and kaitiakitanga to illustrate the projects value and potential contribution to the academic space.

Chapter 2: Literature review - The second chapter of this thesis has collected

literature from both a national and international perspective that highlight key topics such as the importance of place and land, cultural values, the urban space and environmental challenges. The chapter provides an overview of these topics while also showing the key gaps that exist within the literature space about kaitiakitanga and its role in urban spaces.

Chapter 3: Methodology - The methodology chapter discusses the methods used for this research project. Contained in this chapter is information about the methodological approach, survey, focus groups and interviews that were undertaken to collect data about kaitiakitanga and urban spaces. Included in this chapter is information about the participants and how they were recruited.

Chapter 4: Place and Kaitiakitanga - This chapter draws from data gathered from the survey, focus groups and interviews to discuss the ways in which participants understand ideas of place and kaitiakitanga. Drawing from this data, key themes and ideas surface that highlight the ways in which participants use placemaking to support and make sense of their kaitiakitanga practices in the urban space. The key aims for Chapter 4 are:

- To test if there is a relationship between kaitiakitanga practices and opportunities for placemaking in urban places; and
- To explore ideas of home, migration, childhood, places for kaitiakitanga practice and knowledge within urban settings.

Chapter 5: Resource use and Practice - The fifth chapter of this thesis shares the practices and resources that participants are using in the urban space. The chapter analyses data from participants that illustrates changes in resource use and the influence this has on participants practices of kaitiakitanga. The key aims for

Chapter 5 are to:

- Understand the role of resources and practices that are used by participants in urban spaces; and
- Understand what influences engagement of participants in restoration projects.

Chapter 6: Connecting to People and Culture - Chapter six of this thesis shares the role of people and culture in the application of kaitiakitanga. Drawing from the participants data, key ideas about the participants and their understanding of kaitiakitanga surface that discuss relationships to people and culture in urban spaces. The key aims for Chapter 6 are to:

- Evaluate the relationships between demographic aspects and kaitiakitanga knowledge; and
- Understand how the role of hapū may influence kaitiakitanga practices in urban spaces.

Chapter 7: Discussion - This chapter presents key findings from the research project to help answer the research questions:

- How is kaitiakitanga practiced in urban Kirikiriroa? and;
- How does mana and place influence kaitiakitanga knowledge and its application within the urban space?

Using key themes and ideas that have surfaced from Chapters 4, 5 and 6, this chapter delves deeper to highlight underlying areas about kaitiakitanga in the urban place and presents key findings of the research project.

Chapter 8: Conclusion - Finally, this chapter summarises the research project, shares limitations of the project and areas for future research. This chapter will also put forward some key considerations for supporting kaitiakitanga practices in the urban space.

It is hoped that this research project provides insight into the role of place in shaping our cultural values as Māori. More importantly, this research project allows examination of the urban space and its role in shaping understandings of self and cultural practices like kaitiakitanga. Furthermore, the research allows a critical discussion about the urban space and the mobility of Māori through these different spheres. This chapter has presented the rationale and relevance of this research but more importantly how we can use our own experiences to shape robust research projects. The next chapter presents literature that has helped to inform and shape the overall research project but also, highlights gaps in knowledge that this research project will endeavour to contribute towards.

Chapter 2 - Literature Review

"Indigenous law, philosophy and knowledges are core to our indigenous past and hold our present worlds together; they also promise a future for First Nations peoples." (Watson, 2014, p.509)

2.1 Introduction

Watson's (2014) quote expresses the importance of indigenous knowledge in shaping our current realities and furthermore, the potential of this knowledge in shaping and informing our futures as Indigenous peoples. Indigenous knowledge can be viewed as an evolving way of knowing and engaging with the world. The following chapter aims to develop this train of thought by exploring the indigenous narratives and experiences available in literature to present ideas, concepts and perspectives related to the research project. This chapter explores topics such as indigenous relationships to nature, practice and resource use, contrasting nature relationships, placemaking, Māori connection to nature as well as experiences and challenges of urbanisation. This chapter introduces key aspects of knowledge within the wider indigenous community, Māori communities and academic community alike. Additionally, in this chapter I will critically examine and discuss the literature to present key gaps in knowledge related to kaitiakitanga and the urban space.

2.2 Indigenous Peoples and Nature

The relationship of people to nature differs from place to place as people define nature according to their own worldview, culture and beliefs (Ellen, 2016; Hikuroa, Clark, Olsen & Camp, 2018; Waller & Reo, 2018; Watene, 2016). Such relationships can be articulated through material, experiential, cognitive, emotional,

and philosophical aspects (Ives, Abson, Wehrden, Christian & Fisher, 2018). Appiah-Opoku (2007) shares the different ways to view indigenous relationships to nature that are driven by belief systems, knowledge of biotic materials, technical knowledges and cultural knowledges. Appiah-Opoku states:

> Indigenous belief systems constitute an essential part of indigenous knowledge and this becomes clear when the latter is categorized into the following three categories: (a) Knowledge of Biotic Materials involving an intimate and detailed knowledge of the environment, including plants, animals, and natural phenomena; (b) Technical Knowledge which includes development and use of appropriate technologies for primary resource utilization, uses of biotic materials, and humane environmental conservation practices; and, (c) Cultural Knowledge involving indigenous or cultural beliefs, norms, myths, taboos and a holistic worldview that parallels the scientific discipline of ecology. (p.82)

Such knowledge systems help to support the creation of relationships between Indigenous people and nature. Appiah-Opoku's statement purports the way that indigenous knowledges are created and expressed. Therefore, we may see similarities in nature relationships amongst indigenous communities, but such knowledges will largely be influenced by the cultural knowledges, experiences and surroundings of Indigenous people (Appiah-Opoku, 2007; Hikuroa et al., 2018; Waller & Reo, 2018; Watene, 2016). This relationship to the world can further be understood in the way that nature is often positioned as a relative, entitled to appropriate care and respect that would usually be afforded to family members (Patterson, 1999; Turner & Bhattacharyya, 2016). These forms of obligation are embedded within narratives, practices and teachings of indigenous communities with nature (Turner & Bhattacharyya, 2016; Watene, 2016). Viewing nature relationships through this lens highlights the diversity of relationships with nature that incorporate experiences and cultures of people.

The experiences of Indigenous peoples with nature supports the creation of indigenous knowledge systems and allows Indigenous people to draw on responsibilities and obligations to past ancestors to shape this engagement (Appiah-Opoku, 2007; Fitzgerald, 2015). More importantly, Appiah-Opoku (2007) shares the reflective process of nature engagement in how indigenous knowledges may develop, as developing this human-nature relationship also involves the development of our entire being as Indigenous peoples. Appiah-Opoku (2007) shares:

> Indigenous knowledge is a product of Indigenous peoples' direct experience of the workings of nature and its relationship with the social world. It encompasses the mental, intellectual, spiritual and physical development of the individual self and the interconnectedness of the self and society with the earth. (p.82)

The development of the entire indigenous being with and in nature supports the growing knowledges systems of Indigenous peoples and enhances the experiences that further contribute to indigenous knowledge systems. This knowledge loop allows indigenous knowledges and practice to adapt to changing environments as Indigenous peoples continue to engage in different ways with their significant places. Such engagement is further enhanced through the personification of landscapes which is shaped through spiritual connections to the environment as well as social and political aspects of Indigenous peoples lives (Oliveira, 2014).

Indigenous people of Canada, Australia and Hawai'i share similar ideas of personification to lands which are influenced by their lineage to mother earth; and further spiritualised by aspects of air, water and fire (Fitzgerald, 2015; Graham, 1999; McNab, 2009; Oliveira, 2014). Using narratives, these indigenous groups personify the environment to embed knowledge in landscapes and waterbodies to

capture the strong connection between the indigenous body and the environment (Appiah-Opoku, 2007; Graham, 1999; McNab, 2009).

Personification is often discussed in Kānaka Maoli (Hawai'ian Indigenous people) narratives that places an emphasis on the locale of the people. The concept of personalising space is centred within spirituality which can be seen as a key aspect in understanding indigenous connection to place (Oliveira, 2014). Different parts of the environment contribute to the understanding and application of culture that draw on the spiritual connections that we might share to the spiritual and physical realms (Oliveira, 2014). The differentiation of place alludes to the notion that each is attributed with a different set of knowledges, highlighting the need to ensure that each space is protected accordingly. Additionally, Indigenous people of Bear Island, Canada share similar ideas of personification to lands which are influenced by their lineage to mother earth (McNab, 2009). This spiritual connection shared between the indigenous person and the land is presented through bodies of water illustrated as the blood of the earth (McNab, 2009). Characterising both the land and water in this manner further articulates the intrinsic and physical values of landscapes and waterscapes to Indigenous peoples from Bear Island.

Connectivity to land is also practiced by Aboriginal peoples of Australia who utilise the stories of their Creator who shaped the physical terrains of their lands, allowing aboriginal stories to be embedded into these lands for future generations (Graham, 1999). The use of storytelling ensures the longevity of cultural knowledge as landscapes and nature are seen as living beings. These stories allow the establishment of guiding laws about land through ancestral stories of the past (Graham, 1999). This provides a way for Aboriginal people to maintain a connection and loyalty to their ancestors and the treasures that they have left behind,

but to also be guided by the principles set by such ancestors (Graham, 1999). Moreover, the Ojibwe peoples of Canada use the story of the Sky Women to understand the creation of their worlds (Fitzgerald, 2015). The embedded lessons within this narrative, have guided the Ojibwe peoples for centuries as seen through the story of Nanaboozhoo, who recalls the story of the Sky woman and subsequently uses this narrative to overcome challenges (Fitzgerald, 2015). Through this narrative the Sky woman is positioned as a motherlike figure and thus, the Ojibwe people draw wisdom and knowledge from her which have subsequently informed their values system.

These examples share similarities in methods for connection to nature but highlight the different terrains, cultures and people who reside in these varying locations. Such peoples may share similar processes of personification and storytelling but express their relationships to place in different ways. When understood in this manner, our lands and places of significance not only play an important role in our identity and the longevity of knowledge (Johnson, 2013) but they are also important for creating engagement practices that drawn on ideas of kinship and narratives of ancestors that illustrate indigenous relationships to nature (Fitzgerald, 2015; Graham, 1999; McNab, 2009; Oliveira, 2014).

Embedding narratives into nature creates a sense of place of which is also shaped through emotive and ontological connections (Fredericks, 2009). These connections help to mediate spiritual connections and can also initiate increased wellbeing for indigenous communities with nature (Wildcat, McDonald, Irlbacher-Fox & Coulthard, 2014). This increase in well-being informs our identity as Indigenous peoples by showing the value of nature in providing physical and spiritual sustenance for our communities. We should then view place, land and the

environment as part of our being rather than seeing nature as an abstract object (Johnson, 2013).

This presents the idea that place and nature ultimately reflect the character and identity of people and the landscapes and waterbodies around them (Kearney, Brady & Bradley, 2018). Kearney, Brady and Bradley (2018) state "place knowledge is also nuanced, reflecting the character and identity of a specific locale, in as much as it does the character and identity of its people and knowledge holders" (p.365). Place reflects what is contained within our culture, values and concepts. This is particularly true for many indigenous communities who may share similarities in cultural practices however, such practices will be specific to their locale and their views of the world around them. Viewing nature, landscapes, waterbodies and places of significance through this lens presents the diversity of narratives that exist amongst Indigenous peoples and asserts the need to shift understandings away from homogenous perspectives of place-based relationships. Cultural knowledges are therefore, vital in capturing and understanding these varying perspectives of relationships to the natural world (Fitzgerald, 2015; Graham, 1999; Kearney, Brady & Bradley, 2018; McNab, 2009; Oliveira, 2014). Cultural practices can indicate what Indigenous peoples see as valuable to their culture and well-being. In addition to these ideas, establishing connections in places of significance are related to aspects such as occupation, storytelling, ancestral blood connection and more importantly, the rights to enact self-determination through historic narratives and cultural practices (Di Giminiani, 2016). This presents a perspective of land, nature and place as being sites of strength for Indigenous peoples as they provide tools to (re) generate social, spiritual and physical connections to our environment (Wildcat et al., 2014).

The literature presented in this sections expresses the value of nature in how some indigenous communities perceive the world, but also in how connections to nature are constructed. Drawing on narratives, practice and ideas of spirituality, nature and place become integral tools to bind Indigenous peoples to their places of significance (Oliveira, 2014; Turner & Bhattacharyya, 2016; Wildcat et al., 2014). These sites act as safe spaces for the expression of cultural practice and self-determination by indigenous communities as discussed by Di Giminiani (2016). Such aspects assert the value of nature in increasing the well-being of indigenous communities but also aiding in creating and reflecting indigenous identities. The literature share here by varying authors such as Johnson (2013), Watene (2016), Wildcat et al. (2014), Oliveira (2014), Turner and Bhattacharyya (2016), McNab (2009), Appiah-Opoku (2007) and Graham (1999), argue that Indigenous peoples are deeply connected to nature and use personification, narratives and cultural practices, to express this knowledge of connection with nature. The value that stems from this connection to nature creates the responsibility to care for and protect relationships to nature and the cultural knowledge and practices associated to such relationships.

2.3 Indigenous Practices and Resource Use

The connections to nature that are expressed by Indigenous peoples rely on not only knowledge systems, but also the ability to undertake practices with nature (Oliveira, 2014; Turner & Bhattacharyya, 2016; Waller & Reo, 2018; Wildcat et al., 2014). Such practices intertwine knowledges of place, people and culture (Black, 2014; Oliveira, 2014; Turner & Bhattacharyya, 2016; Waller & Reo, 2018). The expression of these practices will vary but are further integral to the development of resource knowledges related to place (Black, 2014; Wehi & Lord, 2017).

Harvesting practices are recognised as important tools that allow Indigenous peoples to flourish in their respective environments, sustain their communities and to create vast bodies of knowledge about such practices (Wehi & Wehi, 2010; Whyte, 2016; Wright, 2014). Hunting, fishing, food gathering and the like, have been used by indigenous communities in different habitats like the Amazon, Arctic, Canada, Costa Rica and Aotearoa (Cameron, Mauro & Settee, 2021; Choo, Zent & Simpson, 2009; Ligtermoet, 2016; Sylvester & Segura, 2016; Wehi & Lord, 2017; Zentner, Kecinski, Letourneau & Davidson, 2019). These practices create and express the long-held connections of indigenous communities to their respective territories (Ligtermoet, 2016; Whyte, 2017; Waller & Reo, 2018; Wehi & Lord, 2017). Harvesting practices by indigenous communities not only provides for indigenous groups well-being and survival, but it also transmits traditional knowledges through to new generations about a particular species, locale and cultural practice (Choo et al., 2009; Glazier, 2019). Furthermore, cultural practices like song and dance help to capture and entrench knowledges related to nature for future generations to use (Glazier, 2019; Turner & Bhattacharyya, 2016).

The reliance of Indigenous peoples on nature for sustenance is captured in traditional harvesting of resources, and in recent times this ability to harvest and undertake integral practices with nature has become challenged (Wehi & Lord, 2017; Wright, 2014). With increased climatic events related to climate change, environmental degradation, globalisation, land dispossession, extinction of species and cultural knowledge depletion, indigenous practices have had to adapt to ensure the longevity of knowledge and occupation within tribal territories (Fernández-Llamazares, Lepofsky, Lertzman, Armstrong, Brondizio, Gavin et al., 2021). The increased risk to Indigenous peoples livelihoods and the opportunity to maintain

these practices today has promoted calls to address such issues at all levels of decision making, from global to national, regional and even local government organisations (Fernández-Llamazares et al., 2021). These institutions must recognise the important role of Indigenous peoples in the protection of biodiversity but more importantly, that such organisations must value the knowledges and practices that allow for indigenous forms of stewardship (Fernández-Llamazares et al., 2021; Ford & Norgaard, 2020). As with this recognition, given cultural practices can change across terrains and people, cultural practices of Indigenous peoples have also been subjected to scrutiny and in some cases condemned by western society (Parlee, Sandlos, & Natcher, 2018; Wehi & Lord, 2017). Such scrutiny of indigenous practices is founded in 'othering' and romanticising Indigenous peoples (Smith, 2012) by viewing Indigenous peoples as historic figures, rather than people living in today's complex society (Parlee et al., 2018). This form of 'othering' romanticises cultural practices and criticises its value in today's modern age which is further evident in decision making for natures protection (Fernández-Llamazares et al., 2021). This further elevates western forms of nature protection as being the ideal form of protecting and combating environmental issues like climate change (Ford & Norgaard, 2020). Moreover, such scrutiny and undervaluing of indigenous practices has been shrouded in the fear that indigenous practices with nature will result in overuse and extinction of resources (Fennell, 2008). The overuse of resources can severely impact indigenous communities, with potential loss of species contributing to the extinction of important cultural knowledges and practice (Wehi, Cox, Roa & Whaanga, 2018). Species loss can prompt change within indigenous communities through the passing of such knowledge to future generations through proverbs, songs and narratives to ensure the protection of species by future generations (Wehi et al., 2018). In addition, Glazier (2019) also

expresses the need to recognise the important role of resource use by Indigenous peoples in not only the longevity of knowledge but also the care and protection of nature. As explained here by Glazier (2019):

> The harvest of wild foods in many cases indirectly facilitates conservation of the natural environment. While hunting and fishing may seem contrary to the goals of many non-indigenous conservationists, such activities are often undertaken in keeping with site-specific customary practices that involve careful attention to effects on local ecosystems inasmuch as such effects may affect potential for food production over time. (p.4)

These perspectives by Glazier (2019), Wehi et al. (2018) and Ford and Norgaard (2020) show the opportunity to learn and adapt practices to ensure natures well-being. This need for traditional harvesting recognition is also expressed by Lyver, Taputu, Kutia and Tahi (2008) about bird species like Kererū and Tītī where challenges have been experienced by Māori tribes such as Tūhoe in acquiring species for the expression of identity and the undertaking of particular cultural practices. Lyver et al. (2008) assert the following:

> Tūhoe continued to go to great lengths to harvest kererū after the practice was outlawed in 1921 because of the bird's immense cultural significance and value. Kererū have a key role within Tūhoe tradition and it is considered whakama (shameful) to receive a visitor of importance and not serve them huahua. This practice is fundamental in defining the iwi and/or individual as a kaitiaki (guardian). Tītī have similar cultural significance for Rakiura in the south of Aotearoa. The re-establishment of native bird harvests is seen by some Māori as the right to express their identity – a desire driven as much (if not more) by the cultural, social, and spiritual significance of the practices associated with the harvests as by the actual need for food. (p.15)

These challenges to indigenous practices and the misinterpretations that accompany such ideas, display the need to grow not only the literature on indigenous practices,

but also the need to recognise the value in indigenous cultural knowledges and practice to the care and protection of nature (Lyver et al., 2008; Parlee et al., 2018; Turner & Bhattacharyya, 2016; Wehi & Lord, 2017).

It further shows that restrictions placed on natural resources can severely harm traditional practices with nature and the longevity of cultural knowledges and identity (Lyver et al., 2008). In addition, viewing nature relationships through an indigenous lens provides a new way to evaluate resource use in efforts to conserve biodiversity in both rural and urban settings. More importantly, it highlights an opportunity to understand where both indigenous knowledges and practice may also support, western knowledge systems of nature relationships.

2.4 Contrasting Nature Relationships

As with indigenous relationships to nature, western scientific perspectives like ecology and other theories further highlight how these relationships can be beneficial for human well-being and the relationships we share to our environments. Often western scientific approaches look to understand knowledges in a way that can be controlled or replicated, creating a universal truth about a particular subject (Sherman, Snodgrass, Sherman, Delcore, & Ross, 2016). In contrast, Indigenous people's interpretation of knowledge, and in this case nature, is largely informed by our own value systems and our worldview (Belshaw, 2001; Turner & Bhattacharyya, 2016), leading to a focus on the experiences rather than the experiment of acquiring knowledge of nature (Sherman et al., 2016).

Approaches such as ecology use this western scientific framework to focus on relationships between sections of the ecosystem as well as the living organisms that exist within these systems (Belshaw, 2001). This approach highlights some shared

similarities to cultural engagements with nature, and with the inclusion of cultural knowledge, can also be enhanced to support indigenous communities and the protection and care of ecosystems.

Attempts to use both western scientific and cultural knowledges to understand nature have previously been tested in academic spaces (Hikuroa, 2017). Deep ecology allows, to an extent, the use of western scientific methods and cultural values to understand ecosystem functions (Belshaw, 2001). As with deep ecology, cultural ecology brings to the fore the utilisation of resources and the influence this has on people and their connection to place (Moran, 2010). Like deep ecology there is also a focus on the role of nature to provide resources for the well-being of people and cultural practices (Belshaw, 2001; Moran, 2010). What these versions of ecology establish, is the emphasis on the human nature relationship and the cultural considerations that can enhance this perspectives of ecology (Belshaw, 2001; Moran, 2010). More importantly, these ideas suggest that there is indeed a synergy that is created between people and nature that varies in understanding and application that is still being (re) defined through different disciplines. Although these theories sit within a largely western scientific perspective, they contrast the benefits of both scientific and cultural knowledges in the care and exploration of nature.

Finding appropriate definitions for nature relationships and culture can also be discussed as a biocultural diversity, which captures the diversity of life evident in nature as well as culture and language (Cuerrier et al., 2015; Maffi, 2005; Maffi & Woodley, 2010). Similar to the perspectives shared by Turner and Bhattacharyya (2016), McNab (2009), Oliveira, (2014), Fitzgerald (2015) and Graham (1999), biocultural diversity allows an understanding of the biological significance of nature but also the cultural

importance of such aspects to people (Currier et al., 2015; Maffi, 2005; Maffi & Woodley, 2010). Birds and plant species are often used to understand this diverse relationship to place and their important roles are embedded in cultural ceremonies, songs, stories and language (Turner & Bhattacharyya, 2016). In addition, the nature cycle associated to these sections of the ecosystem further aids in creating a mutual relationship between nature and people to ensure that the significance of the resource is protected through changing seasons (Turner & Bhattacharyya, 2016). Biocultural diversity further enhances this perspective of nature by providing another lens in which to understand nature's significance to people (Currier et al., 2015; Maffi & Woodley, 2010).

These ideas show that both cultural and western scientific inquiry can co-exist and contribute to the development of both bodies of knowledge. The way we learn about this relationship will largely depend on positive experiences with nature and opportunities to develop cultural knowledge in ways that contribute to our overall well-being (Barreau, Ibarra, Wyndham, Rojas & Kozak, 2016). More importantly, both indigenous and western scientific knowledges should be viewed in their own merits, without misinterpretation (Smith, 2012; Watson, 2014). Hikuroa (2017) shares the synergies that exist between western science and mātauranga Māori as well as the importance of recognising the value of both bodies of knowledge in generating knowledge about the natural world. Although western scientific methods explore the natural world through hypotheses, predictions and the exploration of empirical evidence, mātauranga Māori achieves similar exploration through different tools such as the use of maramataka and pūrākau (Hikuroa, 2017). Recognising the need for both forms of inquiry and the benefits of drawing from these bodies of knowledge, shows the opportunity to develop new projects that

supports the well-being of nature and people (Hikuroa, 2017; Watene, 2016).

Until recently, indigenous lives and knowledges were represented, translated and interpreted by non-indigenous anthropologists, historians, social scientists and scientists in a way which objectified and spoke for and about indigeneity (Smith, 2012; Watson, 2014). This often led to a misinterpretation of indigenous knowledge which created a distrust between western methods of inquiry and indigenous communities (Smith, 2012). This misinterpretation has encouraged indigenous scholars to advocate, use and protect indigenous knowledge systems from misuse in the academic space (Watson, 2014).

There is growing recognition within the scientific community about the significance of indigenous knowledge in the protection of nature (Hall, Wehi, Whaanga, Walker, Koi & Wallace, 2021; Hikuroa, 2017; Hudson, Whaanga, Waiti et al., 2020; Mata, Ramalho, Kennedy et al., 2020; Reyes-García, 2015; Reyes-García, Fernández-Llamazares, McElwee et al., 2019; Sangha & Russell-Smith, 2017; Walker, et al., 2019; Wehi & Wehi, 2010). In addition, indigenous knowledge is now being called upon to address modern environmental issues such as climate change and global warming (Wildcat, 2009). Global warming initiatives have been centred within the confines of western knowledge and western science, however including traditional practices used by indigenous communities could support the appreciation for our natural world and grow new ways to mitigate global warming effects (Wildcat, 2009). Indigenous peoples of Sahel have used their traditional knowledges to cope with increasing droughts and declining rainfall attributed to global warming (Nyong, Adesina and Osman Elasha, 2007). This knowledge and observations of nature from the Indigenous peoples of Sahel has further informed and contributed to weather forecasting, the assessment of vulnerabilities amongst their community

and the implementation of adaptation strategies for Sahel (Nyong, Adesina & Osman Elasha, 2007). Moreover, Saboohi, Barani, Khodagholi, Sarvestani and Tahmasebi (2018) share the efforts by nomadic Indigenous peoples of Iran in managing the impacts of climate change. By drawing on intergenerational observations of their lands and animals, the Indigenous peoples of Iran were able to make reductions of livestock as well as adapt migration patterns of their livestock (Saboohi et al., 2018). These ideas indicate the potential of indigenous knowledge, people, and culture in combatting to environmental degradation (Sherman et al., 2016). The value of cultural knowledge provides a new lens in which to address environmental degradation and support the long-held relationships of Indigenous peoples to nature.

This section illustrates the value of both indigenous knowledge and ecology in achieving positive outcomes for people and nature. It further asserts the importance of indigenous knowledges and relationships to nature to be recognised and valued no matter the domain. Indigenous communities are knowledgeable experts of a particular place as they have lived amongst their territories for centuries, embedding knowledges and practices into their surrounding environments (Johnson, 2013; Sherman et al., 2016; Wildcat, 2009). In doing so, indigenous knowledge has become adaptable and relevant for the generations who utilise it. The legitimacy for using indigenous knowledge is not only valid but inspires new ways to address the environmental issues we face today (Sherman et al., 2016; Smith, 2012; Wildcat, 2009). Using this body of knowledge requires the protection of indigenous knowledge through academic spaces but also the opportunity to develop this knowledge appropriately.

2.5 Placemaking

Creating relationships to place has been articulated through the concept of placemaking. For the most part, placemaking provides a sense of claim between people and their places of residence, encompassing processes of 'shaping' place through cultural practices, knowledges and storying as seen through indigenous practices with nature (Hes, Mateo-Babiano & Lee, 2020). More importantly, placemaking is a continuous process of engagement, reshaping understandings and rearticulating how such 'places' are of value to identity, practices and knowledge systems (Hes, Mateo-Babiano & Lee, 2020). Therefore, we cannot homogenise ideas of place, but rather understand the similarities in placemaking as every place will be viewed according to the people who reside in such areas. Mateo-Babiano and Lee (2020) articulate this diversity of place that may also become challenged in modern times:

> For each of us, the idea of what place is depends upon our cultural, spatial and emotional intelligence and literacy, demonstrated by our geographical footprints and reinforced by familiarity with a particular locale. In an increasingly globalised and multicultural world, historical understandings of generic place, increasingly challenged through cultural lenses that may be shared or distinctive, may provoke either comfort or distress in public places. (p.16)

Moreover, placemaking reflects not only the identity of people but also their priorities in their particular areas (Hes, Mateo-Babiano & Lee, 2020). Although placemaking has often been articulated with reference to its theoretical position, it plays an important role in the longevity of knowledge and the protection of our physical places. When viewed from this perspective placemaking provides opportunities to theorise about place and the different ways we might engage with it (Fincher, Pardy & Shaw, 2016; Hes, Mateo-Babiano & Lee, 2020). However,

there is a need to ensure that placemaking is not confined to the realms of theorising, but rather that placemaking transfers into action and further aids in reflecting the communities who use this process (Fincher, Pardy & Shaw, 2016). Moreover, placemaking can challenge indigenous and minority groups when they are marginalised through the placemaking processes of other people. This may be reflected in placemaking processes that favours one group over another, particularly if resources, level of influence and finances are exclusive to such dominate groups (Fincher, Pardy & Shaw, 2016).

The ideas shared within this section highlight the importance of placemaking in reflecting the cultures, knowledges and people who reside in place. Moreover this section shows aspects that may challenge opportunities to place-make, particularly for those who are often marginalised like indigenous and minority groups. Ideas shared by Fincher et al. (2016), Hes et al. (2020) and Mateo-Babiano and Lee (2020) further assert that place can encompass dynamic perspectives and these perspectives can further be reflected in our physical engagement with place. Furthermore, it highlights the importance of knowledge which is also reflected in how Māori communities' articulate relationships to nature and the opportunities to create a sense of place through nature engagement.

2.6 Environments, Place, Land and Māori

Māori, like many Indigenous peoples share a strong spiritual connection to lands and places of significance (Ka'ai & Higgins, 2004.). This connection is established through a concept of lineage known as whakapapa which acts as a way to preserve responsibility and obligation to our surrounding environments (Mikaere, 2011; Mutu, 2010; Roberts, 2013). This connection through whakapapa is reaffirmed through creation narratives in which Hineahuone births Hinetītama, the first human

noted in Māori cosmology narratives (Rameka, 2017; Roberts, 2013; Walker, 1990). From this narrative, the connections to other gods such as Ranginui, Papatūānuku, Tane Māhuta, Tangaroa, Haumietiketike, Rongomātāne, and Tawhirimātea are established (Ka'ai & Higgins, 2004; Rameka, 2017; Roberts, 2013; Walker, 1990). This forms the basis for Māori relationships to the environment and all living things within it. The creation narratives further articulate the relationship to land as seen through the maternal role of Papatūānuku (Rameka, 2017). Papatūānuku is purported by many Māori communities as a mother-like figure and is used as a symbol to encourage better care of the earth and waterbodies as they are extensions of Papatūānuku (Rameka, 2017; Simmonds, 2009). The relationship between Māori and Papatūānuku is bound through a process of reciprocity as she provides sustenance for Māori whom in turn, protect and care for her (Simmonds, 2009). The intrinsic bonds created through these narratives provide the basis for creating cultural practices that strengthen Māori relationships to nature. Moreover, such intrinsic bonds are articulated as forms of energy or mauri which further aid in measuring the health of nature and the beings who exist within it. Harmsworth and Awatere (2013) elaborate further:

> The traditional Māori world view acknowledged a natural order to the universe, a dynamic system built around the living and the non-living. For Māori the modern use of the terms ecosystem and ecosystem services can be explained through traditional knowledge and the interwoven concepts of whakapapa, mana and kaitiakitanga, and possession of the spiritual qualities of tapu, mauri, and wairua. Traditionally Māori realised that shifts in mauri (life force, life spirit) of any part of the environment, for example through use, would cause shifts in the mauri of immediately related components. As a result, the whole system is eventually affected. All activities and relationships were bound up and governed by mythology, tapu, and an elaborate system of ritenga or rules. The process used by Māori to guide resource use reflects this belief in the interrelationship of all parts of the environment. (p.276)

Understanding the intrinsic relationships within cultural narratives and expressed through ritenga and engagement with nature, conveys the holistic process of connection between people and the environment. As with these intrinsic aspects of nature connection, cultural practices also create strong bonds between Māori and nature. Whenua is a Māori word utilised to describe land but also the placenta of a new-born child, showing dual meaning and emphasising the connection between the land and people through the cultural practice of returning the placenta to the maternal entity, Papatūānuku (King et al., 2018; Moewaka-Barnes, Eich & Yessilth, 2018; Walker, 1990). This practice embodies ideas of whakapapa and connection to both the physical and metaphysical worlds of Māori (Walker, 1990). Reciting pepeha is also important in connecting people to place as it acts as a geographical locator that recognises all important features in a particular locale (Kawharu & Pfeiffer, 2008; Mutu, 2001). Features such as mountains, rivers, lakes, pā sites and marae enable Māori to share with other hapū and iwi the important features of our homes (Kawharu & Pfeiffer, 2008; Mutu, 2001). This is vital for building relationships with other whānau and hapū, but more importantly, for embedding values in our physical landscapes for the purpose of cultural practices. Pepeha not only enables the recognition of landscapes but also aligns to ideas of whakapapa by imbuing narratives of ancestors into prominent features mentioned through the reciting of pepeha (Mutu, 2001). Pepeha not only becomes a tool for location but also a tool for sharing narratives to future generations.

These ideas demonstrate the important tools used by Māori to connect with the environment in both a physical and intrinsic sense. The use of narratives provides not only the basis for connection but also the basis for responsibility. The environment becomes an extension of our physical and spiritual self, similar to the

connections established by Indigenous peoples around the world to their own environments (Rameka, 2017; Roberts, 2013; Walker, 1990). Whakapapa, pepeha, whenua and creation narratives allow Māori to trace lineage to the surrounding environment, creating a sense of reciprocity when we engage with nature. This shows the interconnectedness of our environments with our cultural knowledges and the importance of cultural practices in maintaining this connection to the natural world (Mikaere, 2011; Mutu, 2001; Mutu, 2010; Roberts, 2013). Harmsworth and Awatere (2013) contribute further by highlighting this sense of reciprocity by viewing Māori as part of the ecosystem rather than abstract from it:

> Māori also see themselves as a part of ecosystems rather than separated from ecosystems. To achieve well-being humans require basic materials, health, good social relations, security, and freedom of choice and action. Many of these basic necessities are provided directly and indirectly by ecosystems. Humans not only depend on ecosystems, they influence them directly through land use and management. The strength of this interdependency between humans and ecosystems may be conceptualised as a reciprocal relationship comprising manaaki whenua (caring for the land) and manaaki tangata (caring for people). (p.276)

The assertion from Harmsworth and Awatere (2013) supports not only the cultural dependence of Māori on nature but furthermore the value that nature provides for Māori survival in both a physical and spiritual manner. This section has presented the role of Māori narratives and cultural practices in the maintenance and development of Māori knowledges and identity through the ideas shared by Harmsworth and Awatere (2013), Walker (1990), Simmonds (2009), Roberts (2013) and Rameka (2017) among others. The concepts encapsulated in this section show the spiritual and physical relationships and connections that are created in environments that are centred within the narratives of Māori cosmogony that share similarities to other indigenous cultures. Given over 80% of Māori now live in urban

centres (Meredith, 2015) it raises the question of how Māori connect to modern urban spaces that are not necessarily centred within these traditional narratives. Interestingly, can both traditional and modern narratives of Māori in urban spaces help to encourage connection to the urban space? Although urban spaces may incorporate ideas of modernity and be seen as representations of the western world, they are still built over indigenous lands (Nejad, Walker & Newhouse, 2020). We must then consider how place and nature relationships could exist within urban spaces for Indigenous peoples but also the opportunities for embedding cultural knowledge and practice into urban landscapes (Nejad, Walker & Newhouse, 2020). Moreover, understanding this position requires an exploration of Māori experiences within urban areas and the struggles to connect with traditional and modernised lands.

2.6.1 The Struggle for Connection

Indigenous people's connection to land has faced challenges since the introduction of western doctrines of land claims that have impacted indigenous ways of living (Watson, 2014). The use of western doctrines such as the doctrine of discovery and terra nullius have overridden the claims of Indigenous peoples to their lands and the ways in which we connect to it (Watson, 2014). The doctrines have stripped the spiritual value of land and have replaced it with a monetary value; resulting in the commercialisation of indigenous lands and impacting the protection and care of our sites of significance (Arthur-Worsop, 2014; Moewaka-Barnes et al., 2018). The monetarisation of indigenous lands encourages the view of land as a commodity and not as a vital member of our indigenous family which leaves Indigenous peoples marginalised and disconnected from this vital resource (Moewaka-Barnes et al., 2018). This disconnection of Indigenous peoples is also experienced through

limiting access to lands through the use of restrictive measures like reservations (Di Giminiani, 2016). Reservations have alienated some indigenous communities from narratives within their traditional territories that are embedded in the land itself which are now inaccessible (Di Giminiani, 2016, Moewaka-Barnes et al., 2018). Disconnection from land is a further catalyst for declining engagement with traditional cultural practices and knowledges related to nature and is also seen in urban areas where traditional knowledge may have been lost because of the migration away from traditional home lands (Haami, 2018; Williams, 2015). Like many indigenous communities, Māori are not excluded from such effects and Māori connection to land and place has been tested through the process of land acquisition and community displacement here in Aotearoa.

2.6.2 Colonisation and Māori

Colonisation of Aotearoa and its inhabitants began well before the signing of the 1840 Treaty of Waitangi where Māori were alienated from traditional lands and subsequently, this impacted the retention of culture, identity, language and knowledge (Gagné, 2013; Hill, 2016; Mulholland & Tawhai, 2011). Webb (2017) provides insight into this time period and more importantly, how Māori authority was recognised before the onslaught of colonial tactics that led to the marginalisation and assimilation of Māori people:

> The British, prior to any large-scale political relationship, had acknowledged Māori tribal organisation and political structures in He Whakaputanga o te Rangatiratanga o Nu Tireni: The Declaration of Independence of 1835. Written by the official British Resident at that time, the document recognised the independence and collective authority held by Northern rangatira as chiefs of iwi (tribes). The signing of Te Tiriti of Waitangi (The Treaty of Waitangi) in 1840 by various iwi nationally with the British colonial leaders affirmed Māori political authority and rights over their lands and territories including those of sovereignty and tino rangatiratanga. The

> guarantees recognised Māori control and ownership of resources under the structures of iwi, hapū (subtribe), and whānau (extended family). (p.684)

Although this authority was somewhat recognised, the settler government of the time created legislation and systems to support the colonisation of Aotearoa. Such tactics diminished opportunities to express rangatiratanga and maintain long held connections with tribal spaces, knowledges and cultural practice. The New Zealand Settlements Act (1863) enabled the confiscation of lands through a process known as Raupatu, from rebellious Māori who were part of or affiliated to the Kingitanga movement and these groups could be incarcerated without trial (Fox, 2011; Moewaka-Barnes et al., 2018; New Zealand Settlements Act, 1863; Te Aho, 2011). The confiscated lands would then be on-sold to new settlers to Aotearoa, subsequently displacing Māori communities like those from the Waikato region (Fox, 2011; Te Aho, 2011). In addition to this process, a court system known as the Native Land Court was established which forced the detribalisation of Māori through varying mechanisms such as individualising titles of land, allocating the title of land to 10 people also known as 'the rule of 10', increasing sale of lands to new settlers and fragmenting land lots for speedier sales (Pool, 2015; Williams, 1999). The continued need for Māori to be physically present to ensure their land interest were not lost also drove many to acquiring large amounts of debt and further encouraged land sales to pay money owing (Pool, 2015). The Native Land Courts moved Māori away from hapū communal living and further allowed other non-Māori to lay claim to lands of hapū, dispossessing Māori communities from their tribal lands. Although, this discussion on colonisation is briefly shared here, it illustrates the varying mechanisms that were used in Aotearoa to disconnect Māori from land, culture, resources and ways of living (Moewaka-Barnes, et al., 2018; Mulholland

& Tawhai, 2011). It further proves that in the case of Māori communities, it was a forceful disconnection and subsequently, has contributed to intergenerational separation from our tribal ways of living. These aspects have caused great harm within Māori communities and have challenged whānau and hapū to maintain lands for future generations.

Furthermore, understanding our colonial histories allows better understanding about processes that have further contributed to Māori disconnection from place. As with these colonial narratives, the urban space has also played a role in distancing Māori from nature engagement and changes in cultural knowledge, practice and identity.

2.6.3 Urban 'Place'

Urban places are sites where people from differing backgrounds, terrains, cultures and ethnicities come together to live (Carninal, 2006). Although these sites may be viewed as places for increased well-being and economic opportunities, they have also acted in the displacement and assimilation of indigenous communities (Cardinal, 2006). Māori here in Aotearoa were not exempt from such experiences of urbanisation and this impacted understandings of cultural knowledges, practices and identity. With the arrival of Europeans to Aotearoa in the early 1800's, Māori were exposed to ideas of modernisation and colonialism which saw the rise of small townships and the beginning of the development of urban spaces (Waa, Pearson, & Ryks, 2017). The historical relationship of Māori to urban spaces has been positioned in narratives of assimilation and cultural loss (Hill, 2012). With the promise of better working conditions and modern lifestyles, this initiated the urban migration of Māori to cities (Easton, 2018; Tapsell, 2014; Williams, 2015; Williams, 1999). In the process of migrating, many Māori continued to maintain strong connections with their tribal territories by regularly visiting their 'homes'

(Williams, 2015). Williams (2015) shares how Māori from Panguru maintained their cultural identity during this period of migration. Williams writes:

> Firstly, they maintained and reinforced the values and goals that they brought from Panguru, such as the desire to gain work, to live in better homes and to achieve a higher standard of living. Secondly, they upheld and shepherded the cultural forces that identified them as Panguru people, as whānau and as Māori, such as whakapapa, notions of whānau, rights and obligations, and the ties of faith, or Te Whakapono. The first were values and goals they brought to the city, not values and goals acquired there. The second were strong identifiers that provided a transportable and flexible frame upon which Māori community networks were developed. (p.102)

Williams (2015) ideas indicate the priorities of Māori in maintaining cultural knowledge even through migration. The efforts by Māori from Panguru ensured that the connection with their homelands could be maintained for future generations and that whānau located in home places knew who of their relatives lived in urban spaces (Williams, 2015). The discussion by Williams shows how Māori knowledges and identities were transported into urban spaces because of their value to Māori communities which supported the development of Māori in new urban areas. However, some communities were not fortunate enough to maintain this connection and subsequently lost their ties to 'home' as generations passed (Haami, 2018; King et al., 2018; Rangiheuea, 2011). A disconnection to traditional lands is perceived to lead to disconnection from the cultural underpinnings of the Māori world which has been one of the catalyst for the detachment of some Māori communities to their traditional narratives and ways of living (King et al., 2018; Rangiheuea, 2011; Williams, 2015).

This disconnection is attributed to the assimilation of Māori into western living but furthermore, through the loss of language and culture (King et al., 2018; Waa et al.,

2017). This loss of culture and language was partly driven by the exclusion of Māori cultural values, practices and knowledge within Pākehā dominate spaces (Hill, 2012; King et al., 2018; Rangiheuea, 2011). This disconnection from Māori cultural knowledge and identity is expressed through the limited opportunities to engage with tribal groupings. King et al. (2018) explains:

> Urbanization has disrupted the sense of metaphysical connection to traditional tribal groupings and home-places for many Māori. This has resulted in the adaptation and preservation of aspects of Māori selves and ways-of-being against the new backdrop of city life. (p.1191)

The loss of identity and support from tribal groups within urban spaces forced many Māori to turn to Pākehā ways of living for sustenance. Given the Māori language and cultures limited capacity to contribute to Pākehā lifestyles, many Māori individuals turned to the English language and culture to connect with their new space and surrounding groups (Hill, 2012). This loss of connection manifested into the urban Māori identity that describes those who have lived and occupied the urban space (Rangiheuea, 2011). Because western ideologies are often interwoven throughout urban spaces (Groth & Corijns, 2005), many Māori who migrated to these spaces conformed to these new cultural and social norms (Rangiheuea, 2011).

In 1975, the renaissance of Māori culture occurred throughout Aotearoa in efforts to reinvigorate rangatiratanga within Māori communities and have Māori culture recognised by the Aotearoa Government of that time (Hill, 2012). This saw the resurgence of Māori culture throughout Aotearoa but further allowed the flourishment of Māori ways of being in the urban space. Urban spaces are often seen as sites where commonalities of historical, social, cultural and political features exist (Aladağ, 2017). The Māori renaissance in some part, allowed urban Māori to

reconcile with the urban space and create a homogenous movement to address historic wrong doings.

This movement displays the need to acknowledge our Māori world to reclaim the space, practices, values, concepts and ultimately culture that defines us as Māori (Groth & Corijn, 2005; Porter, Matunga, Viswanathan et al., 2017). One of the ways in which this was achieved in the urban space was through the establishment of urban marae which allowed many Māori people to reconcile this new urban space and claim it as their own (Barcham, 1998; Rangiheuea, 2011). Urban marae were symbols of Māori occupation within the urban space but further re-connected Māori with traditional knowledges and practices in a modern space, subsequently creating pan-tribal identities amongst urban Māori communities (King et al., 2018). These spaces allowed those who may have lost their connection to traditional tribal groups to reconnect with their cultural values, concepts and practices within new tribal boundaries (King et al., 2018).

The examples illuminate how the urban space can be sites of both positive and negative experiences for indigenous communities and ultimately challenge how we maintain connections to tribal culture, practices and knowledge (King et al., 2018; Rangiheuea, 2011). Additionally, it shows the need for more involvement of indigenous communities in dictating how these urban spaces are shaped (Nejad, Walker & Newhouse, 2020) and further, how the inclusion of indigenous values can support the well-being of people. What is apparent through these examples shared within this section, is the role the urban space plays in how we construct our understandings of self and furthermore, how this is reflected in our built environments. This alludes to the hypothesis that the inclusion of Māori cultural values, knowledge and practices in the urban space could provide a way to support

the needs and flourishment of Māori communities in urban spaces. Interestingly, the examples presented in this section highlight the migration of Māori and the impacts this type of movement can have on cultural knowledge and practices.

2.6.4 Urban Migration

The migration of people from rural communities to urban spaces has greatly impacted the deep connection to nature and ecosystem services that contribute to the idea of a 'sense of place'(Cuerrier et al., 2015). For indigenous communities' migration from tribal groups, knowledges and place can severely effect identity and cultural well-being. Sproat (2016) shares the rationale by indigenous communities to remain in their homelands because of the strong ties they share to place:

> The decision to stay or move raises significant political, legal, and cultural issues and, for some, neither adaptation nor migration is an option because indigenous identity and entire cultures and ways of life are inextricably bound to specific lands and resources. (p.165)

Although such ties exist, the role of modernisation has significantly challenged this connection to place and encouraged the dispersal of tribal groups and migration to urban areas. Migration of people to urban areas often denotes negative ideas such as environmental degradation and disconnection from culture (Grau & Aide, 2007; Robinson, 2014). These coupled with limited access to knowledges pose potential risk for not only nature connections but also cultural connections (Robinson, 2014; Somerville & Hickey, 2017). With tides of people from rural communities moving towards the urban space, it has also meant the migration of generational knowledges and potentially, limitations to access this knowledge for both rural and migrating peoples (Grau & Aide, 2007; Kawharu & Tane, 2014; Tapsell, 2014). These challenges for migrants also reflect the risk that are posed for rural communities

whose human capital dwindles due to migration (Grau & Aide, 2007; Haami, 2018; Robinson, 2014; Tapsell, 2014; Williams, 2015). Migration can often initiate a change in our perception of well-being and sense of connection to self. Urban migration can impact connection and practices undertaken in rural environments as rural communities rely on the contribution of all parts of the community for the sustainability and production of resources (Grau & Aide, 2007; Kawharu & Tane, 2014). Transitioning away from these communities has the potential to limit production and consequently influence the longevity of knowledge related to cultural resources of the community, as cultural and ecological knowledge is lost from generations who migrate and do not return to their homelands (Grau & Aide, 2007; Haami, 2018; Tapsell, 2014; Williams, 2015). The communal benefits of rural living are subsequently dispersed because of this migration which can place huge strains on those who remain in rural areas and who become the sole holders of intergenerational knowledges and practices (Grau & Aide, 2007; Kawharu & Tane, 2014). The migration from rural communities has often meant that people, especially those of indigenous communities, have had to adapt to new environments when arriving to urban spaces (King et al., 2018; Rangiheuea, 2011; Williams, 2015). The migration of Māori to the urban space poses questions about the knowledge that they bring into urban areas but also how they continue to maintain and develop these knowledge systems in new environments. Williams (2015) example of Panguru peoples illustrates this migration of knowledge existing within urban spaces of Aotearoa, there is now opportunity to explore not only the types of knowledges that migrate but also how they are expressed in urban areas. The literature in this section highlights the risk to both rural and urban migrant peoples cultural knowledge and practice which shows the needs to explore such movement in relation to kaitiakitanga knowledges.

2.6.5 Māori Diaspora and Identity

The idea of diaspora is used to describe the movement of peoples from their traditional lands whilst maintaining their cultural links to their homes (Braziel & Mannur, 2003). Examples of Māori diaspora occurred during the urbanisation of Aotearoa where whānau moved from traditional lands to urban centres (Williams, 2015; Williams 1999). These same groups adopt, in some parts, the culture of their new surroundings which contributes to a newly formed identity and cultural practices (King et al., 2018; Rangiheuea, 2011; Williams, 2015). Māori communities within the urban space were challenged to maintain such connections and were subsequently perceived to be disconnected from traditional homelands. This naturally created subset identities which are outlined as being Mātāwaka, Taurahere and Taunga waka (Ryks, Pearson & Waa, 2016; Ryks, Simmonds & Whitehead, 2019). Such identities have only recently been widely used as Māori of the city were homogenised into one identity. These 'new' groups are distinct in the way they move in and through the urban space and thus, form a different understanding of their role in occupying such spaces (Ryks et al., 2016). Changes in identity within urban spaces are not unique to Māori communities as similar experiences are being felt by American Indian youth within urban spaces (Kulis, Wagaman, Tso & Brown, 2013). Urban indigenous populations share unique experiences in the urban space which further contributes to their identity and understanding of self (Kulis et al., 2013). It is within the urban space that young Indian tribal members create a connection with other tribal members to construct a pan-tribal identity (Kulis et al., 2013). Similarly, there is now a growing interest in Māori urban identity but more importantly how cultural knowledge is maintained and practiced in the urban space (Ghose & Pettygrove, 2014; King et al., 2018). Ensuring the visibility of Indigenous peoples is important for urban spaces to support the

maintenance of identity and cultural knowledge (Nejad, Walker & Newhouse, 2020). Moreover, capturing the diversity in experiences is also needed to explore the many knowledge systems and understandings of nature that have migrated into the urban space. This provides another angle in which to understand kaitiakitanga practices from the perspectives of both Mana Whenua and Mātāwaka of urban areas.

2.6.5.1 Mana Whenua and Mātāwaka

The mobility of Māori people between urban and rural areas has created different sets of identities known as Mana Whenua and Mātāwaka (Ryks, Simmonds & Whitehead, 2019). Mana Whenua groups hold authority over their territories and are essential in protecting space for their people (Bargh, 2016; Ryks, Simmonds & Whitehead, 2019). Ideas of Mana Whenua are closely linked to self-determination as it provides whānau and hapū of that area the opportunity to be key decision makers of their regions (Bargh, 2016; Mutu, 2010). This link to self-determination is an inherent responsibility to not only ancestors but also to the land, sea and atua (Mutu, 2010). The concept and expression of Mana Whenua relies on whakapapa, as this concept interweaves humans with their natural environments (Mikaere, 2011; Roberts, 2013). In urban spaces, Mana Whenua are referred to as the tribes who occupied the lands of which urban spaces were built over (Ryks, Simmonds & Whitehead, 2019). They hold decision making powers in these areas and are integral to recognising sites of significance, resources of the area and cultural knowledges related to place (Mutu, 2010; Ryks, Simmonds & Whitehead, 2019).

Mātāwaka and Taurahere are terms that are used to distinguish between those who have moved to permanent residency, those who are between their original lands and their new lands; and those who are completely new to a particular place, like urban spaces (Ryks et al., 2016). Understanding the differences in mobility and

occupation that exist within urban Māori groups provides the opportunity to examine the diversity of experiences and application of cultural practices in urban spaces.

Given the movement of Mātāwaka and Taurahere groups to their new regions, difficulties have arisen in relation to their level of engagement within their new places of residence (Rangiheuea, 2011). The relationship between these two groups has been explored by Tawhai (2010) who discusses the engagement of Mātāwaka or rāwaho in local council decision making where limited considerations have been made for exactly which group is consulted on issues affecting Māori. Māori who have moved to the region from elsewhere have raised concerns about their level of engagement as well as their role in aiding in resource restoration and maintenance (Tawhai, 2010). Tawhai (2010) argues that rāwaho have limited access to engage in local resource issues but are wanting to be included and support Mana Whenua in addressing environmental concerns of their region. The comments by Tawhai show opportunity to capture the experiences of both Mana Whenua and Mātāwaka groups and understand where each can support the well-being of the other. Rangiheuea (2011) highlights similar challenges in Mātāwaka exerting rangatiratanga within urban spaces. These experiences highlight unique challenges for tribally distant groups of people in understanding where they can be of value in new tribal spaces. More importantly, the examples highlight the need for guiding principles in how to engage with local people in urban spaces. Therefore, the research project aims to contribute to literature on Māori mobility and furthermore, how this mobility impacts our relationships to identity. Moreover, this opportunity to examine ideas of mobility provides a lens to understand how Mana Whenua and Mātāwaka may create relationships to each other through kaitiakitanga.

2.6.6 Māori Values

Rather than providing simple definitions of Māori values, this section seeks to expand our current knowledge of Māori values and their place in directing our behaviour as Māori. Māori values underpin Māori cultural practices and further allow traditional and contemporary practices to exist today (Mead, 2013; Patterson, 1999). Māori values are holistic and allow Māori to act in an appropriate manner towards each other and our surrounding kin of the natural environment (Lyver et al., 2017; Patterson, 1999). In understanding Māori values we must consider Tikanga Māori as a pool of knowledge continuously developed by generations of Māori, that draws on Māori cultural values (Mead, 2013). Tikanga Māori has the ability to evolve to suit specific places and time; and ensure that practices are updated and valuable for each community (Lyver et al., 2017; Mead, 2013). Although this pool of knowledge develops over time, the fundamental values remain the same, however, the way in which we practice and use these values may evolve. For the purpose of this research key values have been selected for this literature review which are whakapapa, mana, mauri, manaakitanga, kaitiakitanga and the role of kaitiaki. This section shares how each selected concept in this section links and contributes to the research.

2.6.6.1 Whakapapa

Whakapapa is often translated to mean genealogy or lineage and provides an individual an opportunity to understand their connection to ancestors (Forster, 2019; Mead, 2013). By establishing a form of descent from ancestors, whakapapa provides a framework to understand relationships between people and place, and methods for whakapapa exploration are unique to every whānau, hapū and iwi (Mikaere, 2011; Roberts, 2013). In addition, whakapapa allows connections to both

the physical and spiritual world of Māori, by recognising both human and non-human lineage within Māori genealogy (Lyver et al., 2017). These ancestors can be seen as people, natural features, animals, plants, waterbodies and atua (Walker, Ataria, Hughey, Park & Katene, 2021). Whakapapa can therefore be seen as an exploration of self and further captures the relationships and experiences that we undertake in our different environments and time periods (Roberts, 2013). This idea is well summarised by Roberts (2013) who shares:

> Whakapapa as a philosophical construct implies that all things have an origin (in the form of a primal ancestor from which they are descended), and that ontologically things come into being through the process of descent from an ancestor or ancestors. Further, because there is in Māori cosmogony only one set of primal parents or ancestors (Ranginui and Papatūānuku) from whom all things ultimately trace descent, all things are related. (p.93)

Whakapapa has maintained relationships between people and nature, and it is through whakapapa that acts of kaitiakitanga derive its purpose (Roberts et al., 1995). The concept of whakapapa is vital for connection to the world around us as it helps to establish both structural and functional forms of connection to nature (Lyver et al., 2017; Roberts et al., 1995). The structural aspect of whakapapa details lineage to ngā atua, people and the natural world, whilst its functional role details the transmission of responsibilities of mana as well as mauri through to each generation captured within whakapapa (Roberts, 2013). Viewing whakapapa in this sense asserts the continued relationships created and maintained in order to ensure our standing place and responsibilities to the surrounding world (Lyver et al., 2017). More importantly, whakapapa provides a way to reinforce the need to recognise how our own experiences of the world are relevant for future generations.

It is with this idea that we see the need to understand how whakapapa relationships

manifest themselves in the urban space. This is especially useful in understanding our relationships to each other as Māori peoples and also our kin of the natural environment when we are placed within modern urban areas. Urban spaces are already challenging Māori identities, cultural practice and knowledge (King et al., 2018; Rangiheuea, 2011; Ryks, Simmonds & Whitehead, 2019; Williams, 2015). If whakapapa locates individuals to place, there is potential for whakapapa to support the construction of new relationships between Mana Whenua and Mātāwaka, that recognises ancestral connections and obligations to nature by both groups. This area of whakapapa is yet to be explored but requires the exploration of connections to place through whakapapa and how these connections can be used to aid connections between Māori of other tribal areas to their new urban homes.

2.6.6.2 Mana

According to Mead (2013) in his seminal work *Tikanga Māori*, mana, often translated as prestige, authority, or power; can be attributed differently to individuals and communities. Mana is not only held by humans but also by other beings and features of the nature world who are further imbued with their own form of mauri and tapu (Forster, 2019; Mead, 2013; Walker et al., 2021). In this sense, all beings and features of the natural world hold their own mana such as people, lands, waters, and atua, and this is recognised by Māori as important in managing our practices with nature (Barlow, 2015; Forster, 2019). Mead (2013) describes these forms of mana as mana atua, mana tūpuna, mana whenua and mana tangata. Through whakapapa, rights to engage and drawn from mana of ancestors, places, and nature are established and further inform roles of responsibility amongst current and future generations of Māori communities (Forster, 2019; Mead, 2013). Those with more mana or greater levels of mana are given leadership roles with the

responsibility to care for the entire community, both human and non-human alike (Mead, 2013). This shows the importance of not only mana, but also of the integral role that whakapapa plays in ensuring such responsibilities transcend to future generations. Therefore, mana can enable rights to decision making and authority in the management of natural resources within tribal regions (Lyver et al., 2017; Mutu, 2010). Mana, through this perspective, shows that it cannot be used as a tool for ego, but rather it is a responsibility and duty to whānau, hapū, iwi and nature. This responsibility is transferred from generation to generation as highlighted in the whakataukī *'He peka tītoki, arā he kano rangatira'* (Mead & Groove, 2003). The illustration of the tītoki branch insinuates that one must be head-strong, and this trait of mana will be passed down to the next generation (Mead & Groove, 2003).

The literature highlights examples that show mana is inherited and obligates the individual to their community and places of significance. Mana is not restricted to humans but exist in all forms of life. This interplay cements the relationship between the physical and spiritual worlds but also expresses that each realm will entail its own form of knowledge systems and cultural practices in the protection of mana. In this sense, we not only hold our own mana, but can also play a role in protecting the mana held by our kin of the natural world. This is the basis for kaitiakitanga practices. If we are to argue that mana is increased or maintained through constant engagement, how is this idea embodied in the urban space? The research project aims to explore the relationship of mana in how we construct our identities in the urban space and furthermore, how we might use ideas of mana to practice kaitiakitanga in new tribal areas.

2.6.6.3 Manaakitanga

Similar to mana, manaakitanga encompasses a responsibility to the collective (Wehi & Roa, 2019). Often translated to hospitality, manaakitanga encompasses a level of care that is seen in acts of kaitiakitanga. Wildcat, Johnson and Larsen (2017) articulate this concept further:

> This Māori word, manaakitanga, is commonly translated as "hospitality," or showing care and respect for others. If one breaks the word into its constituent parts, mana, the spiritual force within a person, place, or thing; aki, a verb meaning to encourage; and tanga, a suffix designating a process, we then see within manaakitanga the process of encouraging the spiritual force of others toward life affirming ways. (p.2)

As with this definition of encouraging care on a spiritual level, manaakitanga can also encapsulate the physical care of people. A renowned whakataukī states *"He tangata takahi Manuhiri, he marae puehu".* The whakataukī implies that the mistreatment of Manuhiri or visitors results in less engagement with that particular marae as the marae is left with puehu or dust, rather than the warmth of people (Mead & Groove, 2003). This particular whakataukī illustrates the influence of manaakitanga on Māori practices but also on ways that we engage with other Māori people. If Māori are not afforded the appropriate care and hospitality, it will have devastating effects on host Māori communities and the reputation they hold amongst their peers (Wehi & Roa, 2019). Understanding this whakataukī, highlights the role and responsibility placed upon communities to ensure that their visitors are cared for appropriately (Wehi & Roa, 2019). This level of care and responsibility extends further to how Māori engage with nature such as, whenua, wai and other living beings within the natural environment.

The first instances of manaakitanga can be traced back to Papatūānuku and her role as matriarch within Māori narratives (Simmonds, 2009). This value is passed through generations and is now used as a way to articulate and measure hospitality (Mead, 2013). The aforementioned further illustrates how nature can mediate this sense of care. It shows that manaakitanga is not only concerned with caring for manuhiri but also embodies the characteristics of Papatūānuku in how we care for others. The value of manaakitanga must therefore be understood in its application by Mātāwaka to support the protection of nature in urban areas. More importantly, manaakitanga illustrates key rationale for nature engagement through kaitiakitanga.

2.6.6.4 Mauri

Mauri is embedded within every living form in the natural environment. Mauri can be understood as being a spark of life that exist within all forms of the natural environment including within people (Hikuroa et al., 2018; Mead, 2013; Morgan & Fa`aui, 2018). It provides life to physical forms and is able to shift between these physical features, ensuring strong connections between both the physical and spiritual worlds (Mead, 2013; Morgan & Fa`aui, 2018). Barlow (2015) explains that mauri is the binding force between our physical bodies and our wairua. Mauri supports physical beings to live and is often used to measure the well-being of beings within the natural world, without mauri, physical forms become degraded (Hikuroa et al., 2018). Once degraded, mauri can no longer bind to the physical form and thus the separation between the physical form and spiritual worlds occurs (Barlow, 2015). Therefore the maintenance, restoration and protection of mauri is a key goal of kaitiakitanga practices (Hikuroa et al., 2018). Mauri is closely linked to mana and is able to be transferred from one entity to another (Timoti, Lyver, Matamua, Jones & Tahi, 2017). In this sense, we can understand mauri as a metaphysical thread of

energy that transfers life to the physical world, and weaves together with mana and whakapapa to give meaning and rational for kaitiakitanga practices (Barlow, 2015; Hikuroa et al., 2018; Lyver et al., 2017). This understanding of mauri is further expressed by Tuawhenua participants of Timoti et al. (2017) study that highlights the relationship between whakapapa and mauri:

> Tuawhenua participants describe mauri as life essence or life force which is linked intrinsically to whakapapa. It is a concept that describes the representativeness and condition of the relationships and responsibilities between elements of whakapapa. Mauri denotes the interconnectedness and appropriate sequential order of elements within whakapapa. Tuawhenua recognize that people have a critical role to protect the mauri of the environment. They also acknowledged that everything has a mauri, and that at times it can be invoked or instilled into someone or something to maintain the set of obligations within the whakapapa. (p.3)

Through this understanding, mauri enhances the role of mana while supporting the well-being of people and nature. In this case, mauri could potentially provide a way for Mātāwaka to connect to nature in urban spaces by using the protection of mauri as a way to guide appropriate practices in urban spaces. This is particularly important for undertaking practices like kaitiakitanga. However, more exploration is needed to understand how mauri is recognised and valued in practices of urban kaitiakitanga.

2.6.6.5 Kaitiaki

Kaitiakitanga is derived from the word kaitiaki which was a term used to describe beings who protected Māori in both the spiritual and physical realms (Lockhart, Houkamau, Sibley, & Osborne, 2019; Marsden & Henare, 1992; Mutu, 2010). These beings were tasked with protecting particular areas of significance and were also signs from ancestors to their descendants (Mutu, 2010). The role of the kaitiaki is to nurture, protect, measure, and restore the mauri within all living things

(Marsden & Henare, 1992; Mutu, 2010). These signs were useful in telling those within the physical realm that an issue had arisen and needed to be rectified (Marsden & Henare, 1992). It is only with the modernisation of Aotearoa that the role of kaitiaki has included people in the care and protection of the environment (Kawharu, 2000). The varying forms of kaitiaki, that resided within different levels of the spiritual world were core in human interpretation of signs from the spiritual realm. Marsden and Henare (1992) share insight about the spiritual children of Ranginui and Papatūānuku as the first instance of kaitiaki. I quote Marsden and Henare in length who capture the importance of ngā atua to the role of kaitiaki:

> The ancient ones (tawhito), the spiritual sons and daughters of Rangi and Papa were the 'Kaitiaki' or guardians. Tane was the Kaitiaki of the forest; Tangaroa of the sea, Rongo of herbs and root crops, Hine Nui te Po of the portals of death and so on. Different tawhito had oversight of the various departments of nature. And whilst man could harvest those resources they were duty bound to thank and propitiate the guardians of those resources. Thus the Māori made ritual acts of propitiation before embarking upon hunting, fishing, digging root crops, cutting down trees and other pursuits of a similar nature. When fishing, the first fish caught was set free as an offering to Tangaroa; and when felling a tree the first chips were burnt and their essence offered up to Tane. Only then could man use the substance. When a meeting house was completed the tapu of Tane was removed to enable the people to use it freely. Kumara or fernroot was dug and the first fruits cooked and then waved as an offering before Rongo. The steam rising from the cooked food was sweet smelling savour offered to the Tawhito (ancient ones) as a thanksgiving, and the substance in the food retained for man. (p.67)

The important role of ngā atua as the first instance of kaitiaki highlights the spiritual aspect of the role but more importantly, how the role itself relies on cultural practices to ensure engagement with different atua. Roberts et al. (1995) further explores the depth of the role of kaitiaki by these different atua by highlighting the various aspects that a kaitiaki may be tasked to care for or protect. Moreover, the

passage from Roberts et al. (1995) shares how this role can be held by people. Roberts explains:

> Tane's various kaitiaki duties include all plants, insects and birds (as Tane i te hokahoka); kaitiaki of all tapu (sacred) things, of good and evil spirits, of all ritual (as Tane i te wananga); and as the first born, kaitiaki of all kaitiaki, Tane matua. Additional to these all-embracing cosmic gods/ guardians/kaitiaki were tribal kaitiaki who provided each iwi with exclusive access to the mana of that particular god. (p.11)

When viewing kaitiaki through these ideas, there is a clear connection that is established through the role of kaitiaki to the spiritual world. More importantly, the role itself ensures continued connection between ngā atua and people. As with such connections, kaitiaki can also exist as animals or as other forms of spiritual beings like taniwha (Roberts et al., 1995). These spiritual beings who reside in different atua domains would be imbued with the same mana of ngā atua and have said to be the manifestations of particular atua (Kawharu, 2000; Roberts et al., 1995). These expressions of atua are equally applied to the social world, where people may not be imbued with the same level of mana but will provide the connection between people and ngā atua (Kawharu, 2000). More importantly, people have taken the protector role of kaitiaki and have applied this process to the valuable aspects in the world around us today. Kawharu (2000) shares how rangatira or kaumātua may be viewed as kaitiaki and aid in the management of resources. Kawharu (2000) also expresses how spiritual works would be commonly undertaken by tohunga, further contributing to the varying degrees of the kaitiaki role. Kawharu (2000) explains:

> In the social world, kaumātua ‘elders’ and rangatira ‘leaders’ are the principal kaitiaki of the kin group and administer all the major affairs of their people politically, economically and spiritually. Resource use and distribution in general,
> and large fishing parties or crop harvesting groups in particular were organised by rangatira and kaumātua, while the spiritual management of resources and people was

> undertaken by specialist rangatira or kaumātua, called tohunga. The management ethic entailed a fundamental responsibility of accountability. Tohunga, rangatira and kaumātua were accountable to, and kept in check by, the wider kin group who recognised them and who together upheld the values pertaining to tapu, mana and the reciprocity between kin. (p.360)

The ideas shared by Kawharu (2000) asserts the integral role of the collective hapū in ensuring that the kaitiaki acts accordingly in the protection of nature but also in the care and protection of the entire community. Upholding the mana of the kaitiaki role is therefore important and must further recognise the spiritual nature of kaitiakitanga. For this reason, many of the carvings on meetings houses express the reputation of kaitiaki and are further integral to the identity of the hapū and community (Kawharu, 2000). These ideas shared within this section show the care that must be taken when using the kaitiaki role. It also indicates the mediating process in how kaitiakitanga can be expressed in the protection of both the physical and spiritual realms.

2.6.6.6 Kaitiakitanga

Māori academics have discussed, explored and critiqued the concept of kaitiakitanga and this has contributed immensely to the understanding of this concept today (Kawharu, 2000; Marsden & Henare, 1992; Mutu, 2010; Roberts, 2013; Selby & Moore, 2010). Kinship relationships exist between Māori and the environment which largely draw on ideas of whakapapa, mana and mauri (Kawharu, 2000). Whakapapa relationships to the environment inform knowledges about the importance of mauri and mana, but also the expression of kaitiakitanga. (Mikaere, 2011; Mutu, 2010; Roberts, 2013). Kaitiakitanga intertwines reciprocal relationships between people and the environment, providing opportunities to increase the mauri of both people and nature (Kawharu, 2000; Marsden & Henare, 1992). Although there is limited historical mentions of kaitiakitanga, whānau and

hapū practiced this concept in traditional times and used kinship narratives to shape their practices of kaitiakitanga (Kawharu, 2000).

Kaitiakitanga has been undertaken by many whānau and hapū. This protection of mana, mauri and whakapapa is seen in actions by Ngāti Kahu and how they undertake kaitiakitanga in their region where knowledge and narratives that exist within these territories are handed down through generations so that they too, understand their role and responsibilities in their area (Mutu, 2010). Additionally, Henwood and Henwood (2011) detail the kaitiakitanga activities of Ngāpuhi hapū in the restoration of lake Ōmāpere in the northern parts of Aotearoa. Because lake Ōmāpere is seen as a taonga to local hapū, the need to exercise kaitiakitanga is important in not only protecting this taonga, but also the mana held by local hapū (Henwood & Henwood, 2011). Utilising a kaitiakitanga framework, local hapū were able to work together with other stakeholders to focus on the restoration of the lake (Henwood & Henwood, 2011). Henwood and Henwood share insight into this process:

> Tasked with developing a restoration and management strategy for the lake (to be funded by MfE), the [Lake Ōmāpere Project Management Group] knew that success was dependent on pulling several community factions together and working holistically with the environment. This involved a catchment-wide approach, ma uta ki tai; the notion of catchments comprising a variety of ecosystems and characteristics and having a self-restorative character by way of constant cleaning and flushing with fresh water. (p.226)

The kaitiakitanga framework draws on reciprocity and collective engagement to ensure that the Ōmāpere project contributes to both the enhancement of the lake and the protection of cultural knowledges and practices within the wider community. Other examples of kaitiakitanga are also captured in legislation such

as Te Awa Tupua (Whanganui River Claims Settlement) Act (2017) and the Te Urewera Act (2014) that use ideas of personhood to both the Whanganui river and to Te Urewera, drawing from ideas of kaitiakitanga to emphasise this personification of nature. Kaitiakitanga can therefore be bound by intergenerational knowledge and relationships (Mutu, 2010; Walker et al., 2019) but can be expressed in different ways in both nature and policy.

Similar to the roles held within Ngāti Kahu, kaitiaki roles of Ngāti Pareraukawa also support their responsibilities and obligations to their respective regions (Selby & Moore, 2010). This role is maintained through the whakapapa links of Ngāti Pareraukawa to their regions and allows them to engage with other government entities inside this boundary (Selby & Moore, 2010). These kaitiaki roles held by hapū are often challenged when misunderstood by non-Māori entities and kaitiaki roles can often be seen by outside entities as a hinderance to development (Selby et al., 2010). This assumption has meant Māori who exercise kaitiaki obligations are left to feel unacknowledged leading to whānau and hapū like Ngāti Pareraukawa remaining vocal and asserting their rangatiratanga about issues that affect their regions (Selby & Moore 2010).

Given the changing landscapes of Aotearoa, the role and responsibility of kaitiaki are continually being challenged as new environmental issues arise. Challenges related to land ownership, migration and modernisation have meant that traditional kaitiaki practices and practitioners are now being tested in upholding their responsibilities and obligations to place (Selby & Moore, 2010; Walker et al., 2019). Regardless of these changes in how relationships to nature are perceived, kaitiaki must still uphold the mana of their role and exercise the practices associated to this role. As expressed by Johnson (2013) legislation cannot hinder the needs for

cultural and spiritual connection to nature and more importantly to the spiritual realm. Johnson (2013) states:

> Māori have not relied on legislation, though, to permit them to continue to act as guardians of their treasured resources. The role of kaitiaki has been an honored position with significant responsibilities since long before the RMA, or the Treaty of Waitangi for that matter....With or without the legal recognition of the state, Māori continue to act as kaitiaki over those resources which they have been invested to protect. (p.130)

This has meant that those practicing kaitiakitanga and those who uphold the role of kaitiaki are now tasked with maintaining traditional knowledge and further upskilling and manoeuvring through modern systems of environmental management to ensure that cultural values, practices and knowledges are upheld in western processes of environmental management (Selby & Moore, 2010). Although, the purpose of this section is to introduce the idea of kaitiakitanga and its value within Māori society, it is important to acknowledge its current state and its complexities. Kaitiakitanga can therefore be seen as a concept that requires a balancing of the spiritual and physical realms (Kawharu 2010; Marsden & Henare, 1992; Mutu, 2010). It entails continued lobbying to ensure western institutions recognise the responsibilities afforded to Māori groups of an area through whakapapa (Mutu, 2010; Selby & Moore, 2010). This then begs the question, how is the concept of kaitiakitanga undertaken in the urban space? given that a large number of Māori now reside in urban areas. Moreover, how are transient Māori maintaining this practice and knowledge systems in urban areas. The urban space provides a new context to understand kaitiakitanga but to also scope the future challenges we may face in its application and maintenance in urban areas.

2.7 Urban Experiences

The significance of nature has become more prominent in urban spaces as more research develops about natures role in increased health outcomes (Shanahan, Lin, Bush, Gaston, Dean, Barber & Fuller, 2015). With increasing environmental challenges indigenous communities worldwide now contend with limitations in nature access and opportunities to continue cultural practices within urban spaces (Somerville & Hickey, 2017). The following section focusses largely on the urban space and how we might perceive relationships to nature within this space by exploring aspects related to biodiversity, place, culture and identity.

2.7.1 Urban Biodiversity

The urban space is not usually associated to ideas of nature, however in recent decades there has been an increased interest in the role of urban nature in human well-being (Cox, Shanahan, Hudson, Fuller & Gaston, 2018). Nature within urban spaces is established in varying ways, from being remnants of old wild places or constructed by people to serve a particular purpose but are usually related to green spaces that support the health and well-being of urban peoples (Davis, 2003; Shanahan et al., 2015). Urban nature is usually fragmented throughout cities in order to provide access for different peoples to green spaces in their neighbourhoods (Ikin, Le Roux, Rayner, Villasen, Eyles, Gibbons, Manning & Lindenmayer, 2015). Subsequently, human perception of the natural space they occupy is never fixed within the urban setting and continues to grow and develop according to perceptions, trends and the culture of urban people (Davis, 2003). Urban nature is also articulated as lifeforms like birds who also act as a form of urban nature and allow urban peoples to connect to nature by caring for this lifeform (Galbraith, Beggs, Jones, McNaughton, Krull & Stanley, 2014) Additionally, urban

nature can be defined as small insects and invertebrates which further contribute to perception of nature in urban areas (Samways, 2007). The habitats that support these lifeforms are not only forested areas but can be attributed to small gardens, hedges, roadside trenches and grassy areas (Ikin et al., 2015). Nature in urban spaces can therefore be diverse lifeforms or habitats where humans and biodiversity co-exist.

It is important that urban nature supports opportunities to truly experience dynamic functions of biodiversity (Samways, 2007). To further contribute to these ideas, there is a need for better established natural spaces to attract all forms of life, not just the artificial species injected into urban spaces by humans (Robinson, 2003; Samways, 2007). This creates an opportunity to grow our bio-literacy within urban areas to contribute to our education of species, flora and fauna within the places we reside (Robinson, 2003; Santos, Delabie & Queiroz, 2019). This offers an opportunity to build stronger relationships with local biodiversity but it also shows the need to ensure individuals know and connect with the biodiversity of their areas, especially in urban areas (Robinson, 2003). A limited knowledge pool about the importance of such biodiversity can result in relationships and practices associated to these species becoming challenged (Soga & Gaston, 2016). This not only highlights challenges to knowledges related to nature but also the opportunities to plan appropriately so that all urban peoples can engage with these nature sites. Ikin et al. (2015) share the importance of recognising risks to urban biodiversity in all its forms. Here Ikin et al. (2015) share the need to ensure that nature is left to develop away from urban development:

> Planning ecologically sensitive suburbs at the urban fringe, and sensitively managing established urban areas adjacent to large areas of greenspace, is important to reduce negative effects on adjacent habitats. Urban planning should carefully consider the

> impacts of encroachment, housing density and urban-related disturbances at the urban fringe and implement strategies to mitigate impacts. By retaining large, undisturbed areas of habitat away from urban areas, and avoiding intensive development adjacent to important conservation areas. (p.208)

Additionally, Robinson (2003) and Santos et al. (2019) highlight the opportunity for green space within urban areas to reflect the biodiversity that once existed before the construction of the urban space itself. Such efforts would need to explore the indigenous biodiversity of the urban space but may also benefit from the exploration of Indigenous people's cultural knowledge. It could further provide opportunity to share biological information from an indigenous perspective to support ecological restoration activities which have been highlighted by Belshaw (2001) and Turner and Bhattacharyya (2016) as integral components for protecting and creating meaningful relationships to biodiversity. Reinvigorating indigenous flora and fauna could also support the reinvigoration of Indigenous people's cultural knowledge of nature in urban spaces. However, these aspects need to be explored further to understand how cultural knowledge like kaitiakitanga is being maintained in urban spaces with respective to engagement with natural resources.

2.7.2 Urban Nature and Well-being

Experiences with nature can provide diverse outcomes, especially outcomes related to health and well-being (Cox et al., 2018; Shanahan et al., 2015). For Indigenous peoples, this well-being is expressed through cultural practices with nature and the opportunities to create knowledges often embedded into nature. However, there is a need to explore how such well-being is experienced in urban areas. Nature in urban spaces contributes to an increase in health and wellbeing, particularly for symptoms of stress and anxiety (Jarvis, Koehoorn, Gergel & Bosch, 2020). Not only does nature in urban spaces relieve these mental challenges it can also

contribute to increased physical and emotional well-being and health (Capaldi, Dopko & Zelenski, 2014; Jarvis et al., 2020; Keniger, Gaston, Irvine & Fuller, 2013). The physical benefits of nature engagement also support opportunities to combat health ailments such as poor respiratory health, sedentary lifestyles, mental unwellness and obesity related health issues (Irvine, Warber, Devine-Wright & Gaston, 2013). By creating nature aspects that entice users to become actively engaged in these spaces, urban nature can increase the attachment and affinity that urban peoples hold towards these spaces (Irvine et al., 2016). More importantly, positive experience amongst nature leads to increased care for nature amongst urban peoples (Soga & Gaston, 2016).

Shanahan et al. (2015) shares that species selection in urban spaces can help to enhance public health. For example choosing plants for parks and recreational spaces based on their low level of irritability for allergy sufferers could increase positive affinity to nature (Shanahan et al., 2015). Designing parks and recreational spaces with restorative values embedded in their shape and function can also increase levels of positivity experienced by urban peoples (Giusti & Samuelsson, 2020). What this points to is the diverse outcomes that can surface when urban peoples have opportunities to engage with nature in varying ways like community gardens, urban parks and general green space in urban areas (Foo, 2016; Soga & Gaston, 2016). Although nature connections can be challenged within urban spaces, ensuring accessibility and variety in urban nature experiences will contribute immensely to nature engagement (Soga & Gaston, 2016). Moreover, such experiences will enhance people's affinity to nature and the long-term connections they may establish and maintain to urban nature.

Importantly, the examples highlight positive outcomes with nature engagement that

can contribute to pro-environmental behaviours, but also the need to ensure that urban green spaces are as diverse as the people who use them (Davis, 2003; Robinson, 2003; Samways, 2007). This supports the value of nature to our well-being but also advocates for its protection and care in urban areas. It further shows the need to ensure that all people within urban spaces, both local and migrant, have opportunities to create strong connections with urban nature, to reap such benefits.

2.7.3 Connecting in Urban Spaces

Urban spaces have become sites where both domestic and international peoples can reside and share local and international knowledges (Brown, 2016). Urban spaces provide an opportunity to exchange knowledges and also experiences between different people, thus creating a space for knowledge and practice to grow and develop in varying ways (Brown, 2016). There is a growing interest in the way that urban nature can support not only health benefits but also the understanding of cultures from across the world. The way we might engage with nature and the different types of nature varies from observation, harvesting, seed collection and bird feeding (Galbraith et al., 2014; Stanley et al., 2015). Given the diversity of the urban space and the people who reside within it, nature engagement can look very different for those who live in these urban areas and therefore, limiting the 'manicured' construction of urban nature may help to support these interpretations and practices with nature (Robinson, 2003; Samways, 2007; Chan, Pennisi & Francis, 2016).

Community gardens are no different from previous examples of urban nature and provide many benefits for urban peoples and their opportunity to connect to nature aspects (Ghose & Pettygrove, 2014). Gardening is universally practiced by different communities and thus, community gardens act as a mutual ground for knowledge

sharing and spaces to enact self-determination (Ghose & Pettygrove, 2014). Although community gardens can be seen as human manipulated site of nature, they encompass wide-ranging benefits that provide for peoples who migrate to urban spaces (Chan, Pennisi & Francis, 2016). These benefits can be attributed to the level of connection that participants create to place. This idea is expressed in Ghose and Pettygrove's (2014) study of community gardens:

> Harambee gardens appear to function as spaces of inclusion based on shared interest and the necessities of collaborating to plan and maintain physical garden spaces. In most gardens, participants of different races and ages interact, and many report feelings of community emerging from these interactions. (p.1103)

Community gardens can act as a hub for social interaction between people and provide an opportunity to share cultural knowledge and develop a 'sense of place' through gardening work, further embedding gardening practices from homelands into the urban space (Chan et al., 2016; Ghose & Pettygrove, 2014). In addition, local peoples can also share their gardening knowledges with migrant peoples as well as introduce new plant species and uses (Chan et al., 2016). Community gardens then become spaces for mutual works to be undertaken that include the incorporation of varying plant species to the garden and allows the gardeners to maintain their cultural harvesting methods through this approach (Baker, 2019). The social-ecological benefits of community gardens address health issues, social separation, challenges with identity as well as economic hardship that is often experienced by migrant urban people (Chan et al., 2016). Although those involved in community gardens come from diverse backgrounds, they are able to share their cultural knowledge and ensure the longevity of connection to specific plant species through their community gardens but to also learn about other cultural practices and

endemic species of their new place of residence (Chan et al., 2016; Giusti & Samuelsson, 2020). This not only shows a commitment to learning but also encourages the embodiment of ecological knowledge within a foreign space. What is highlighted through this example is the process of nature engagement that is inherent in community gardens but also the way that simple forms of nature practices can create a sense of place in urban areas. These spaces do not fit the definition of a 'wild' form of nature but still allow a relationship to place and nature to develop through gardening practices (Baker, 2019). Using Māori values could allow more meaning to surface of such spaces like those within urban areas that are viewed as untouched, simple or wild. Within a Māori framework lands were cared for and managed through the understandings of whakapapa connections to Papatūānuku (Simmonds, 2009; Walker, 1990), as well as informed by the intrinsic value of particular spaces to Māori communities. Urban 'wild spaces' or simple forms of nature can be more valued through a Māori framework by highlighting their intrinsic value in placemaking and the longevity of cultural knowledges and practices in urban areas.

What the literature has shown is the need to understand the inherent value of all types of nature in providing opportunities for connection. In addition, providing different spaces for multi-use or the expression of different cultures further supports connection to place to be established and maintained. There is opportunity in creating spaces for cultural practices to allow a sharing of knowledge however, for urban spaces in Aotearoa, an understanding of Mana Whenua and Mātāwaka relationships is needed to further explore how kaitiakitanga could provide and support a space that mediates peoples relationships in urban areas.

2.7.4 Urban Nature Challenges

There are emerging threats to nature in urban spaces that range from physical and biological threats due to increased expansion of the urban space and the growing technological advancements impacting areas of cultural significance (Cuerrier et al., 2015). Urban centres not only require building infrastructure, but also include transportation corridors which also spread across wide terrains (Cuerrier et al., 2015). The expansion of the urban space not only threatens nature but also the remaining natural sections on the fringes of cities that are often important for indigenous cultural practices (Cuerrier et al., 2015; Jackson & Ormsby, 2017). As with this expansion of the urban space, limited knowledge in how to engage with biodiversity can cause harm to species and encourage an increase in invasive species in urban areas (Galbraith et al., 2014). In addition, emerging threats to biodiversity within the urban space are also surfacing beyond more usual challenges such as climate change, pollution and natural habitat loss but further consider threats to biodiversity that are novel to the research space (Stanley et al., 2015). These threats range from digital mimicry of nature, light pollution from LED lighting, scattering of cremains and the spread of disease through pets such as cats (Stanley et al., 2015). These threats to biodiversity show different ways in which nature engagement can be affected but also force us to reconsider the potential challenges to nature that may often be overlooked in planning for nature in urban spaces. Artificial light has the potential to affect plant development as plants rely on light for information about the timing and seasons in their location (Bennie et al., 2016; Gaston & Halt, 2018). The scattering of cremains in urban nature could impact water tables and soil by spreading high amounts of mercury (Stanley et al., 2015). Understanding the potential threats to biodiversity in urban spaces highlights the need for multiple approaches to mitigating the risk to urban biodiversity and our

opportunities to engage with it.

As with these threats, nature is now becoming inequitable as access to nature in urban areas for those in low socio-economic areas becomes limited with larger sections of urban nature located in areas that have high property value (Jennings et al., 2012; Poe et al., 2013). Children may also be disadvantaged from accessing nature in urban areas because of restrictions placed on them by their parents (Hand et al., 2018). This limitation to access nature risk disengagement with nature and the development of the extinction of experience (Soga & Gaston, 2016). The extinction of experience with nature proposes that urban nature experiences are impacted by the lack of engagement with the outside world due to more time being spent on devices and limitations in accessing nature in urban spaces (Samways, 2007). The way in which we might experience nature also changes, subsequently creating biophobias from a lack of engagement (Soga et al., 2020). Dull forms of nature can further contribute to this lack of experience which deters people from engaging with nature in urban spaces as there is limited rarity in urban nature experiences (Samways, 2007; Miller, 2005).

Urban spaces have the opportunity to increase human and nature relationships by including cultural mechanism to ensure knowledge transmission of ecological processes and benefits for humans (Emery & Hurley, 2016) but also that nature is accessed by all urban dwellers. More importantly, urban spaces could allow meaning and emotion to be embedded into nature creating opportunities for place-based attachments to flourish (Emery & Hurley, 2016).

Soga et al. (2016) discusses the different ways that nature can be appreciated and subsequently protected. Not only are direct experiences of nature important for its

protection but there are also opportunities to encourage nature protection through vicarious means such as books, films, play-time, stories and television (Soga et al., 2016). Recognising areas we may not see as valuable such as drains, creeks and abandoned land lots, can also play a significant role in teaching people about nature and enhancing their experiences (Soga et al, 2016; Samways, 2007). These vicarious ways for increasing appreciation of nature in urban places, appropriate planning and recognition in law could put forward new ways to support nature in urban spaces.

Urban planning has traditionally been centred within western practice and has not allowed the exploration of indigenous ways of planning for our environment (Matunga, 2017). Planning of urban spaces uses tools like mapping, zoning and the delegation of functions to space that continues to maintain dominant western cultural norms in urban area (Nejad, Walker, Macdougall, Belanger, & Newhouse, 2019; Porter & Barry, 2015). Disregarding indigenous understandings of planning has limited how the urban space is shaped and the inclusion of indigenous models of space planning, especially for the urban environment (Matunga, 2017; Nejad, Walker & Newhouse, 2020). There is a need to challenge western notions of planning as indigenous communities have processes of planning that are useful for urban spaces (Matunga, 2017). Moreover, ensuring that indigenous identity is reflected in urban spaces not only pays homage to the original occupants of urban lands, but also challenges western ideas of urban space planning. Nejad, Walker and Newhouse (2020) express the need for indigenous designs to be visible in urban spaces and that this visibility captures both past and present indigenous identity. Nejad, Walker and Newhouse (2020) write:

> In incorporating urban design activities to reflect Indigenous

> cultures in cities, it is vital to represent not only the past but also the contemporary presence and contribution of Indigenous peoples to urban society. The focus on the past should consider Indigenous original occupancy and meanings attached to the land. The focus on the present should be about the expression of these meanings in present design and placemaking. (p.438)

Through ideas of placemaking, this sentiment of making Indigenous peoples both past and present visible can be possible in urban spaces. Moreover, it further alludes to the possibility of using kaitiakitanga concepts as ways to increase visibility by encouraging practices within urban areas. It is only within the last two decades that Māori values and customs have been included in laws, policies and other guiding documents for local government and national government organisations (Dalziel, Matunga & Saunders, 2006). Since the renaissance of Māori culture in Aotearoa, there has been acknowledgement to include such values in policy which has been largely driven by the recognition of the Treaty of Waitangi (Hill, 2012). What is apparent is the need to ensure that these documents and processes not only reflect the authentic nature of these values, customs and culture, but that they are also applied appropriately within different communities. Policies and laws can support these efforts of cultural reinvigoration as policy is likely to impact communities at all levels (Gustafson, 2010). Policy also plays a role in shifting attitudes in relation to sustainability (Livesey, 2010). Interweaving indigenous concepts, values and culture will not only support these efforts for better sustainable attitudes and practices; but it will also enable more learning opportunities about Indigenous peoples, like Māori. The RMA uses a similar approach to environmental protection by regulating natural resource use in Aotearoa (Morad & Jay 2000; Daigneault, Eppink, & Lee, 2017). However, there has been some tension with the RMA's interpretation of kaitiakitanga, with many believing that the legislation itself does not adequately capture the full breath of kaitiakitanga knowledge and practice

(Ruru, 2018; Clarke, 2004; Walker et al., 2019). Likewise, the Local Government Act (LGA) sets out the parameters for resource use and management within local council jurisdiction (Tawhai, 2010). The historic generalisations of Māori within this piece of legislation created uncertainty for Mana Whenua and Mātāwaka groups as there was no clear definition as to who local councils were required to engage with, rather it was left to the councils to make such decisions (Tawhai, 2010). As a result the LGA has been known to limit the expression of rangatiratanga by Mana Whenua groups and engagement by Mātāwaka groups in resource and environmental issues in their areas of residence (Tawhai, 2010). Given the large population of Māori communities who now live within the urban space, it is empirical that the study considers varying influences in the application of kaitiakitanga in urban spaces.

Shifting expectations of urban nature to ensure that it provides for human and biodiversity needs while also using innovative ways to encourage nature engagement must be at the forefront of urban space design and planning. What is also apparent in these examples is the potential opportunities to use cultural practices and values as a way to increase nature engagement and enable better biodiversity health. As previous examples have shown access to nature and the opportunities to engage with ecological knowledge systems differs. This is particularly important in considering how different parts of the urban community access nature but also where indigenous values like kaitiakitanga can be of value for nature appreciation and mitigating negative threats on urban nature.

2.7.5 Ecological Science and Mātauranga Māori

There has been a surge in interest and lobbying to ensure mātauranga Māori is recognised as a valid body of knowledge to develop solutions for challenges

currently faced in Aotearoa (Durie, 2020). Mātauranga Māori is positioned to aid in transforming current practices, especially within science disciplines to provide new perspectives and ways of understanding the world around us (Durie, 2020; Hikuroa, 2017). Mātauranga Māori is now being heralded as a pivotal aspect in ecological restoration as it provides a new knowledge system to use in shaping ecological projects. Wehi (2009) states the importance of indigenous knowledge in shaping ecological restoration as it incorporates lived experiences of indigenous communities. Furthermore, indigenous communities' relational approach to the environment provides a means to understand the relationship of cultural practice and species protection in today's modern age (Wehi, Beggs & McAllister, 2019). This advocates for the collaboration of ecological western knowledge and mātauranga Māori to contribute to the protection of our natural world. Ecological restoration has provided a physical response to environmental degradation and has further expanded into the urban space (Clarkson et al., 2007b). This has seen the growth of urban restoration projects that create opportunities to enhance the ecological well-being of the urban environment (Clarkson et al., 2007a; Hall et al., 2021; Peters et al., 2015).

Experiences within urban spaces that largely draw on ideas of stewardship within urban green spaces provide placemaking opportunities for urban peoples (see de Kleyn, Mumaw & Corney, 2020). There have been examples of where ecological restoration and mātauranga Māori have worked collaboratively to enhance the well-being of our natural environment (see Geary et al., 2019; Hall et al., 2021; Hikuroa et al., 2018; Michel et al., 2019; Ratana, Herangi & Murray, 2019 for further discussion). What is limited, however, is understanding how these two fields of knowledge can be harnessed to restore the urban space and support the

expression of cultural practices by Māori communities. A study undertaken by Hall et al. (2021) highlights the actions of Ngāti Whātua in Auckland, Aotearoa in regenerating native forest within their urban tribal boundary. These efforts largely draw on cultural knowledges and enhance not only biodiversity but also the opportunities for tribal and non-tribal people to connect to nature and the narratives of local Māori. Hall et al. (2021) share:

> Many volunteers, of many backgrounds, return so consistently that they sometimes obtain employment with the program. The ecological restoration work reconnects workers with the land such that following initial restoration efforts many of these practitioners often choose to remain in the area to care for the restored ecosystem. The program leaders attribute success to the empowerment of Indigenous People, because effective programs that promote equality and revitalizing of local [indigenous knowledge] are run by Māori, primarily to benefit Māori. (p.5)

This project highlights the efforts of urban Māori in supporting nature and shows the need to explore further how kaitiakitanga may frame such engagements. Therefore, it is important that this research project looks to understand how urban Māori engage with urban restoration and furthermore, how Māori practice aspects of environmental protection through kaitiakitanga. As kaitiakitanga has been used widely in articulating environmental sustainability, understanding if these relationships exist between Māori and restoration projects may provide new ways to explore how to create restoration projects for nature that draw largely on Māori values and practices for the urban space (Walker et al., 2019). More importantly, understanding the intersection between mātauranga Māori and western knowledge could also show where efforts can be enhanced and developed to support multi-engagements with urban nature.

2.8 Key Gaps in Literature

The literature presented in this chapter has provided insight into underpinning ideas that have helped to shape the research project as a whole. It has brought to the surface, key areas of literature gaps related to kaitiakitanga in the urban space. Moreover, it has reported areas where the research could be of value and aid in expanding understandings of urban people's experiences with nature.

2.8.1 Placemaking

Placemaking in the urban space requires better understanding in how a sense of place is constructed when access to nature is limited. Literature by Ellen (2016), McNab (2009), Oliveira (2014), Fitzgerald (2015) among others in this chapter, has highlighted the integral role of place in the creation of identity, knowledge and cultural practices. What is lacking in much of this literature is the placemaking opportunities by urban indigenous communities. Although experiences of urban peoples are captured in the literature by Williams (2015), Williams (1999), Rangiheuea (2011), King et al. (2018), Haami (2018), there is sparse understandings about how connecting to nature through cultural practices could support connection to urban places.

The research on kaitiakitanga will allow an opportunity to not only view urban space through a cultural lens, but to also understand the implications of cultural practices in our opportunities to create attachment to place. Placemaking through kaitiakitanga could shed light on how people engage with nature in urban spaces and what parts of nature enable this placemaking practice to be undertaken. Placemaking through kaitiakitanga may enable a clear understanding of how placemaking from a Māori cultural lens occurs for Māori who have migrated from other areas of Aotearoa.

2.8.2 Kaitiakitanga and Mobility

The idea of mobility in relation to the application of kaitiakitanga is rarely discussed in academic literature. Although mobility is discussed by Williams (2015), Rangiheuea (2011), King et al. (2018), Williams (1999), Haami (2018), Grau and Aide (2007), there is a developing interest in how mobility may influence a change in cultural practices. The literature has shown that historic accounts of migration has impacted understandings of identity and culture. Therefore, more analysis is required to understand how mobility of Māori influences cultural knowledge and practice in today's modern age. Through examining kaitiakitanga in urban places, the research can highlight how our mobility to and through urban spaces contributes to the application of our cultural practices.

2.8.3 Kaitiakitanga and Urban Spaces

Kaitiakitanga has been discussed widely by academics in relation to environmental issues (see Mikaere, 2011; Mutu, 2010; Roberts, 2013). Current discussions about kaitiakitanga have been in relation to its definition and its application by hapū in natural resource issues in their respective regions. Applying a contextual understanding to both its definition and application will allow a different perspective of kaitiakitanga to surface that considers its value in urban spaces. The literature has shown that there are challenges that face kaitiakitanga in both its understanding and application. Therefore, the research provides a lens to explore how it is being understood and practiced in urban spaces. This can potentially contribute to ways in which the concept can be used to connect people to place, culture and nature.

2.8.4 Mātāwaka Relationships

There are emerging narratives of Mātāwaka and their experiences in new spaces (see Ryks, Simmonds & Whitehead, 2019; Tawhai, 2010). However, there is sparse literature that helps to clearly articulate how these experiences may be explored through a particular cultural practice. For those who live within urban spaces, there is also a lack of understanding about the cultural knowledge and practices held by migrant Māori. Moreover, there is limited understanding in how Mātāwaka might use these cultural practices in new tribal territories. For this reason, the research project uses practices of kaitiakitanga to highlight some of the challenges that Mātāwaka may experiences as well as highlight how they overcome such challenges. More importantly, the research provides an opportunity to contribute new ways to understand our contribution as Mātāwaka to the well-being and care of other tribal groups places and resources of significance.

2.8.5 Levels of Kaitiakitanga

A key area that has scarcely been analysed is the varying levels of kaitiakitanga application. Although there is a large amount of literature that highlights the definition and environmental application of the concept, it is rare that kaitiakitanga is discussed in relation to different realms or applied beyond its environmental aspect. To expand further, kaitiakitanga has generally been explore in its application for the care and protection of the environment but there is limited discussion in how this concept may differ in changing environments from the land to the sea. Exploring how our practices of kaitiakitanga may change in different environments could contribute new knowledges for protecting these varying environments. Therefore, this research project will draw on this gap in knowledge to seek out the different ways that kaitiakitanga is used and understood in the urban space.

These gaps in literature show the importance of this research project and where the research can make a substantial contribution. It further asserts the need to explore how Māori concepts are applied in the urban space and the influence of these spaces on the application and development of our Māori values and concepts. For this reason, the data chapters of this thesis have been shaped by key themes such as place, resources and practice along with culture and people. These themes have allowed the thesis to draw on participants data related to these key themes. More information about the rationale to shape the chapters in this manner can be found in Chapter 3.

2.9 Conclusion

This chapter has highlighted key areas of interest for this research project. What has surfaced through this literature review is the need to understand how traditional knowledge changes in new places. There is also a need to understand the challenges that Indigenous peoples face in urban spaces and the influences that may impact knowledge systems, cultural practice, and connections to nature. These challenges can potentially alter our practices and our understanding of identity and culture. This chapter has presented key concepts and arguments to show the importance of this research project and highlights the gaps that exist within academic literature about kaitiakitanga in urban spaces.

What this chapter has provided is the need to explore all aspects of kaitiakitanga that enable its environmental application but also its potential to mediate our relationships to the urban space. To do this, important aspects such as locale, people and culture must be analysed in relation to kaitiakitanga. The next chapter details how the research project for this thesis was undertaken. Using the ideas explored in this review, the methodology chapter details the approach for this research project

as well as how the data was collected from participants. Both the literature review and methodology chapters will allow the reader to better understand the rationale for this research project and how the themes of this review have been used to shape the direction of this research.

Chapter 3 - Methodology

"What happens to research when the researched become the researchers?"

(Smith, 2012, p.185)

3.1 Introduction

In 1999, Linda Tuhiwai Smith asked how Indigenous peoples, who have been researched extensively in ways that sustain unequal power relationships within colonial frameworks, can (re) create and (re) establish methods of inquiry that are relevant to our indigenous communities (Smith, 2012). She also touches on the potential of indigenous communities to direct our own research projects and decipher information that we see as relevant (Smith, 2012).

In this research, I draw on engagement practices common in my own whānau and hapū. These practices help to construct research in ways that recognise the mana and mauri of participants who share their experiences and knowledges in ways that strongly align with Kaupapa Māori theory as described by Smith (2012). Seeking these forms of literature and theory enables safer practices of research to develop within the academy, that recognise the effects of imperialism on Māori communities and our knowledge systems. Furthermore, new researchers like me have the opportunity to explore our existing knowledges and develop appropriate methods of inquiry through research.

Therefore, I utilise the literature by Smith to set the basis for this chapter to advocate and justify the methodological approach of this research project and the subsequent methods used to gather and analyse Māori data. I draw on Adichie's (2009) message of diversity in our writing and to ensure that what is written in this body of work supports the different realities of Māori who have engaged with this research

project. In this research project I have collected data using a survey, focus groups and interviews from Māori within the urban space of Kirikiriroa and Māori from across Aotearoa, to provide insight into their experiences and knowledge of kaitiakitanga. This chapter outlines the methodologies used in this project that have shaped the direction and methods of this study. I also present information about the participants, their data and how it was analysed and finally, some concluding statements.

3.2 Theory and Methodology

The methods used for the purpose of this research project have been selected to gain both national and local perspectives about kaitiakitanga and the urban space from across Aotearoa. Māori communities and their relationships to their places are diverse, both qualitative and quantitative methods were included to capture data from these different communities. Therefore, this research project has used a mixed methods approach (see Halcomb & Hickman, 2015; McKim, 2017) to gather the appropriate data from participants that are built on the foundation of Kaupapa Māori Theory (KMT).

KMT and practice emerged within the fields of Humanities and Education during the late 1980s and is now widely utilised across many fields within academic institutions (Jackson, 2015). Pihama (2015) notes that Kaupapa Māori as a theory is centred within the principles and beliefs of Te Ao Māori and has allowed Māori a vehicle to theorise by providing context to their approach to research. This centres KMT within a cultural paradigm and draws on Māori ways of knowing in its inception. In western theoretical knowledge, ontological, epistemological, methodological and axiological knowledges may be used to make sense of the world around us (Curtis, 2016). These western approaches are not new to many

Māori and non-Māori academics alike, however in a Kaupapa Māori framework these mechanisms for understanding the world are also seen within Māori knowledge systems. Māori theoretical frameworks provide a uniquely cultural lens in which to apply these theoretical aspects. Curtis (2016) explores such ideas in relation to positioning ourselves as Māori researchers. More importantly, Curtis highlights how our cultural lens may also challenge these understandings of theoretical mechanisms. Curtis (2016) writes:

> Māori society believes in the spiritual connectedness between the living and the non-living and the interrelatedness between people, the land, the sea and all beings. So in a Māori ontology, it is real to talk directly to our ancestors within cultural ceremonies, and damage to the environment is often seen as damage to us as a people, as reflected in our understanding of reality. (p.397)

Although we may share space with non-Māori, our perception of reality and how we make sense of it requires a unique framework in which to undertake and explore the world around us. This is where KMT becomes not only important to support such exploration, but vital in challenging these largely western perspectives of theorising.

KMT encourages the use of Māori knowledges, values, concepts and experiences as valid foundations for research through the exploration of theorising from a Māori perspective (Pihama, Tiakiwai & Southey, 2015). The growth and use of Kaupapa Māori as an approach and theory to research, has stemmed from the resistance of Māori academics to utilise western theories and methodologies that often do not align with our Māori communities approaches of inquiry (Hikuroa, 2017; Moewaka-Barnes, 2000; Pihama, Tiakiwai & Southey, 2015). Shifting this power imbalance encourages those who contribute to the academic space to see the value

that Māori knowledge systems hold without comparison to western knowledge systems (Bishop, 1998). Although KMT provides such opportunities to challenge western ideas of theorising, KMT has also experienced challenges to its validity and existence (Moewaka-Barnes, 2000). Such challenges present further rationale to support KMT within research as expressed by Moewaka-Barnes (2000):

> Denying the existence of Kaupapa Māori research can be seen as a lack of understanding that the worldview of a researcher is integral to the research and how it is carried out, including the way in which methodologies and methods are developed. This dismisses the existence of distinct differences arising from ideology and approach related to ethnicity and culture. (p.30)

This position that is presented by Moewaka-Barnes (2000) asserts the need to recognise varying ways of theorising and also acknowledges the different worldviews that may develop new approaches to acquiring and developing knowledge systems. Using KMT ensures that our actions of theorising can be developed into practical implications for our Māori communities as KMT is shaped in both a theoretical and praxis space and is therefore, applicable to wider Māori society (Hiha, 2016; Pihama, Tiakiwai & Southey, 2015). Therefore, Kaupapa Māori is not only about the theorising of concepts, ideas and values, it is also about the implementation of change (Curtis, 2016). This highlights the importance of Kaupapa Māori research as being a vehicle to challenge how research is both perceived and constructed, particularly research about and for Māori (Pihama, 2015).

The ideas shared here by Smith (2012), Pihama (2015), Bishop (1998), Moewaka-Barnes (2000), and Curtis (2016) provides the platform for Māori academics to articulate our own processes of engagement that align with our worldview, giving the opportunity to share approaches to research in ways that empower our

communities and their knowledges. This particular theoretical approach further allows Māori researchers to integrate Māori concepts, values, and ideals into mainstream research methods to ensure that they provide safe research approaches for Māori people (Seed-Pihama, 2017). Incorporating such knowledge into research recognises the diversity of Māori who might use KMT to shape their projects but also asserts that there is no one way to undertake or define Kaupapa Māori research. This idea shows Kaupapa Māori research may intersect with other bodies of knowledge but will largely draw from Māori knowledge systems. This is further elaborated by Smith (2012):

> Under the rubric of Kaupapa Māori research different sets of ideas and issues are being claimed as important. Some of these intersect at different points with research as an activity. Some of these features are framed as assumptions, some as practices and methods, and some are related to Māori conceptions of knowledge. (p.187)

What we value will, therefore, be reflected in our research and KMT provides an opportunity to create safe methods to engage with valuable knowledges, practices, places, and people.

There are challenges in using a theoretical basis that aligns with one's own worldview where issues of legitimacy could surface. Hoskins (2012) discusses the idea of strategic essentialism in Kaupapa Māori research and its role in unifying Māori to achieve outcomes that support the growth of a particular group of people. This idea presented by Hoskins (2012) could imply that Kaupapa Māori is restrictive as it only focuses on the well-being of one ethnic group but furthermore that development from Kaupapa Māori projects will only benefit Māori communities. There is also potential in a unified Māori voice homogenising voices of whānau and hapū. Discussions about KMT could hint at ideas of protectionism being placed on mātauranga Māori, limiting opportunities for mātauranga Māori to be scrutinised,

challenged, and critiqued in the academy. Further arguments purport that other theories such as Critical theory (Thompson, 2017) or Postmodernism (Cooper & Burrell, 2016) could be more appropriate to support the theoretical underpinnings of this project. Critical theory could support the critique of kaitiakitanga experiences in urban areas but also explore the social conditions that may influence kaitiakitanga in urban spaces (Thompson, 2017). In addition, Postmodernism may provide an opportunity to see kaitiakitanga away from its normative understandings, further pushing the boundaries in how the concept is perceived and developed by urban Māori communities (Cooper & Burrell, 2016).

Although these challenges highlight areas of concern, they also posit stronger rationale for the use of Kaupapa Māori to support the exploration of Māori experiences through frameworks, concepts, and values of Māori communities. Given the fluidity of understandings, varying interpretations and intersectoral nature of KMT (Seed-Pihama, 2017), KMT can draw from both critical theory and postmodernism to assert the social conditions of Māori people and our experiences by exploring varying expressions of cultural knowledges while being framed in a Māori theoretical space. Moreover, a key role of KMT is to recognise the diversity of experiences and knowledges held within Māori communities (Pihama, Cram & Walker, 2002). KMT does not aim to homogenise Māori experiences but asserts the need to recognise lived experiences across generations and terrains. This recognition provides new ways to view the world and create understandings and outcomes that addresses such diversity (Smith, Pihama, & South, 2018). The very use of KMT is a direct challenge to the academy to accept the legitimacy of Māori knowledges and experiences. KMT pushes back on the need to validate Māori research through western theoretical underpinnings. Through using narratives, values, and concepts

to construct this research project, KMT ensures the project is relatable to the communities that were part of the research. More importantly, KMT allows Māori academics to challenge, critique and scrutinise our knowledges systems through tools we would often use in our communities. It provides Māori academics the opportunity to explore our cultural knowledges and experiences, to pull apart what we perceive and how we perceive our changing world. Theories and approaches to research are not abstract from the authors worldviews and understandings and are fundamentally woven throughout the entire research project (Moewaka-Barnes, 2000). Therefore, discussing and stating the positionality, theories and methodological approach is not only justified but needed. This centres my research within a Māori academic space and furthermore, encourages Māori ways of undertaking and understanding research. It provides a wider understanding of the research project from its inception through to the completion of this piece of writing. This further shows the longevity of research within the Māori academic space. It must be made clear in the outset, that this research project does not wish to exclude other groups of people from engaging with this body of literature, but to express the authors appreciation for the need to better understand our values and concepts as Māori in how we undertake research.

KMT provided the foundations of this research project to support the use of Māori knowledge in creating research methods. KMT allowed me to use Pūrākau methodology and develop a Manuhiri methodological approach (see section 3.2.3) to recognise different ways that participants made sense of their kaitiakitanga practices and also the use of storying to portray the participants experiences. Furthermore, KMT allowed me to inquire into approaches for research that were useful in engaging with different communities. For this reason, I developed the

concept of Manuhiri as a research approach that recognises the mana and mauri of all participants, both Mana Whenua and Mātāwaka alike. I also used KMT as a way to help make sense of the participants perspectives of kaitiakitanga and how this knowledge may be informed by social and cultural conditions both in and outside of the urban space. KMT also supported the rationale to use my own hapū knowledge and experiences to frame the research and further highlight the personal relationship that we as Māori researchers will hold to our works. I, as a Māori researcher cannot be abstract from this body of work (Smith, 2012) as the origins of this work have largely stemmed from my own experiences. But rather, KMT allows me to recognise my biases of being closely connected to this body of work as well as being part of the Mātāwaka community of Kirikiriroa and provides opportunity to unpack such experiences for the benefit of creating a robust piece of research. It allows me as a researcher to recognise my tūranga within this body of work and understand both the positive and challenging outcomes that may stem from being closely connected to the research project. KMT has provided a basis for creating safe approaches in this research project that examines kaitiakitanga experiences within the urban space.

3.2.1 Kaupapa Māori Methodology

In addition to using Kaupapa Māori as the theoretical basis for this research project, it has also been employed as one of the methodological approaches for this research project. Kaupapa Māori as a methodology outlines key components in engagement with Māori through research. Interpreting Kaupapa Māori has been difficult for many Māori academics as according to Hiha (2016), Kaupapa Māori is fluid in its approach and understanding; and that there is no succinct definition of the concept. Thus there is no prescribed way to undertake Kaupapa Māori research but rather, we

incorporate our values and concepts to develop research methods that would be helpful for our communities (Simmonds, 2014). There is also a need to move beyond conversations of theory and instigate a 'whole body' way of learning (Simpson, 2014). This type of indigenous inquiry into the world can be used to inform our understanding of methods that draw on our epistemologies and worldviews (Simpson, 2014). In using Kaupapa Māori methodology, it allows care and consideration to be applied when interpreting and presenting participants data as often, the collection and analysis of data is just as contentious as the construction of the research project (Kukutai & Taylor, 2016). This reinforces the role of Kaupapa Māori in shaping safe approaches to research from both its inception to its completion. Furthermore, it pushes Māori academics to consider the way in which we interpret and present our data back to the communities who were part of the data collection process.

For this research project I used Kaupapa Māori methodology to shape the interview process, the survey, the focus groups, and the analysis of the participants data. I ensured that all participants data and information was held by me and stored in a safe place. I ensured that participants understood the reasoning for the research project and why engaging with them was important. This was also captured in gaining consent from participants in both written and oral form.

Interviews:

For the interviews, I used the Kaupapa Māori methodology to allow participants to choose spaces for the interviews, to share their perspectives of kaitiakitanga free from comparison to general knowledges and to also allow participants to answer questions in Te Reo Māori or English. I also gave participants the opportunity to edit their transcripts and remove any sensitive information they shared with me. I

used questions that explored their cultural knowledge and urban experiences to draw out important perspectives of kaitiakitanga.

Focus Groups:

For the focus groups, I created focus group activities that were tailored to suit different age groups. I also used Kaupapa Māori methodology to allow participants to choose how much of the focus group they wanted to participate in. I also shared initial findings of the survey with the participants to further contribute to their knowledge of kaitiakitanga and support ideas of reciprocity during the focus groups. I used maps, post it-notes activities and group discussions to ensure every participant could engage in the focus group activities. This created a safe space for all participants and recognised their mana in their decision making.

Survey:

I also used Kaupapa Māori methodology in the survey by creating questions that explored not only general information about participants but also information about their tribal affiliations to recognise the importance of these groups to participants. I also included map activities, open ended questions, and question matrix to allow participants to share more in-depth discussion of their knowledge and experiences.

Data Analysis:

In addition to these methods I also used Kaupapa Māori methodology in the analysis of the participants data. I incorporated the concept of whakapapa and pūrākau to explore where the participants have come from and how they have developed their kaitiakitanga practices in urban spaces. This fused all participants data into a story of kaitiakitanga in urban spaces.

3.2.2 Pūrākau Methodology

In this thesis I have used storying to help frame my own experiences of kaitiakitanga and more importantly the experiences of the participants of this research project. Storying has been used by indigenous communities to make sense of the surrounding world and the phenomena that occur within it (Aldern & Goode, 2014). Storying can be used to share information about a time period, the environment and the ancestors who reside in those time periods through traditional, historical, and topical narratives (Aldern & Goode, 2014; Tuck, Mckenzie & Mccoy, 2014). These three forms of narratives provide a basis to see the ever-changing way our stories are presented. It is with this notion we can understand storying to be fluid and time specific and it is up to future generations to interpret these stories accordingly. Interpretations of these narratives have varied from community to community, but they still play a vital role in how communities engage with their surroundings (Lowan, 2009; Oliveira, 2014). Naming a place shows not only the knowledge that has been constructed in this space, but the stories used by indigenous communities, further cementing kinship relationships between Indigenous peoples to their environment (Heikkilä, 2014; Salmón, 2012).

Pūrākau as a research methodology encourages the reclamation of Māori storytelling (Lee, 2009). Pūrākau methodology is a tool that allows Māori communities to recentre our ways of storytelling within our own unique Māori lens but to also provide an opportunity to (re) story our current understandings of the Māori world in the academic space. Lee (2009) expresses the need to redevelop the use of pūrākau, stating:

> Pūrākau is a term not usually associated with academic writing or research methodology; rather, Pūrākau is most commonly used to refer to Māori ‘myths and legends’. Pūrākau, however,

> should not be relegated to the category of fiction and fable of the past. Pūrākau, a traditional form of Māori narrative, contains philosophical thought, epistemological constructs, cultural codes, and worldviews that are fundamental to our identity as Māori. (p.96)

Therefore, Pūrākau provide an opportunity to rethink how we view ideas of representation and ultimately how we influence the representation of our Māori communities through academic writing (Lee, 2009). Understanding the narratives we bring forth in academic literature ensures an authentic representation of our people and the world around them, free from colonial interpretations that have often misrepresented our people and knowledge (Smith, 2012). The importance of storying in academic spaces further encourages the recognition of participants homes, landscapes, connections to nature and people to surface (Aldern & Goode, 2014; Lee, 2009; Tuck, Mckenzie & Mccoy, 2014). Therefore, rather than contributing to romanticised versions of our communities, we consider writing better accounts of their experiences and knowledge. I used the Pūrākau methodology in the survey, interviews, data analysis and to shape the overall thesis.

Survey:

I used Pūrākau methodology in the survey by including open ended questions to allow the participants to discuss their thoughts on kaitiakitanga. I provided questions in the survey that allowed the participants to show their physical location, further contributing to the recognition of their local hapū knowledge. I also included questions that provided participants the opportunity to explain their selection to ensure their narrative of kaitiakitanga were portrayed accurately. I also included other activities in the survey like mapping activities, gage activities, question matrix and areas for discussion. This gave participants opportunities to present their experiences in different forms.

Interviews:

In the interviews I used the open-ended question *" Tell me about yourself and your mahi"* as the first question to ask each participant. This gave the participants the opportunity to share parts of their lives freely and allowed me to understand their lives leading up to where they currently reside. I used open-ended questions throughout the interview process along with prompting questions where needed to allow participants to express their thoughts and experiences.

Analysis:

In the analysis, I used the NVIVO 12 software to code the participants data into overarching themes. These themes informed the research findings and areas for future research. I also used a thematic analysis to further express the key ideas in the stories of participants. I used the Qualtrics and the SPSS software to analyse the relationships between certain themes to understand if they influenced how participants understood kaitiakitanga.

Overall thesis:

I used Pūrākau in this thesis by including my own narrative of kaitiakitanga in Chapter 1 to frame the thesis. I used this methodology to shape the data chapters so that each chapter presents a 'story' of kaitiakitanga in relation to a particular theme. This helped to highlight my own position and narrative within this research project.

3.2.3 Manuhiri Principle as a Methodology

The Manuhiri methodological approach was used in the interviews, focus groups, and the presentation of the findings back to participants and their whānau. Due to the varying nature of whānau, hapū and iwi, interpretations of Māori phenomena are fluid in every region (Jackson, 2015). Such differences mean information will

undoubtedly change over time and thus considerations need to be made in how we approach these different groups. The concept of Manuhiri has been included in this research project to provide this connection and way of engagement with Māori in the urban space. It also provides an ethical approach to research that protects both the researcher and participant. Traditionally, the term Manuhiri is used to describe someone who is new or a frequent visitor to an area and is associated with the pōhiri process (Jones, 2005; McClintock, Mellsop, Moeke-Maxwell & Merry, 2012). Positioning ourselves as Manuhiri, particularly in academic settings allows the sharing of knowledge but also the recognition of Māori ways of engagement in new tribal areas (John, 2020; Jones, 2005).

Using the concept of Manuhiri ensures recognition of home people as well as their cultural narratives and practices that are integral to the expression of mana and rangatiratanga (John, 2020). There are some key aspects that create the role of Manuhiri that are noted by John (2020) as well as McClintock, Mellsop, Moeke-Maxwell and Merry (2012) such as:

- Being a visitor to a place;
- Being respectful of Mana Whenua;
- Having a kaupapa or matter to bring to the hau kāinga;
- Often invited into the region;
- Have made appropriate arrangements to enter the new place;
- Share mauri during the pōhiri process; and
- Be aware of mana held by host groups.

Utilising these aspects and the concepts of mana, tapu and noa, Manuhiri as an approach allowed me to safely engage with different participants and understand

their varying perspectives of kaitiakitanga. Although Kaupapa Māori methodology allows for a general understanding of Māori engagement, Manuhiri methodology allows a specific understanding of Mana Whenua and Mātāwaka groups and the relationships shared between them. I used this methodology to engage with both Mana Whenua and Mātāwaka groups through the research project and respectfully gather their kōrero. It further encouraged the recognition of both historic and modern narratives to be shared in these spaces.

A key part of the Manuhiri methodological approach is the recognition of mana and mauri, as well as the transfer of mauri from one group to the other, which is also evident in the pōhiri process (McClintock et al., 2012). It further emphasises the need to return the kōrero that was shared by participants so that the mauri of the kōrero does not remain with the researcher but is gifted back to the participants. Manuhiri as a methodology allows the researcher to be critical of how we approach communities and to always be aware of our position as guest. I used the Manuhiri methodology in the interviews and focus groups as well as the presentation of findings.

Interviews and focus groups:

I used the Manuhiri methodology in both the interviews and focus groups to engage with participants of both Mana Whenua and Mātāwaka descent. I shaped questions specifically for these groups to understand how they practiced kaitiakitanga. This approach allowed me to recognise the differences in perspective of both groups.

Presentation of findings:

Findings of the research were presented in summary form to the participants. Where appropriate, participants were also included in the process of drafting transcripts

and those who did not wish to participate in this process were respected in their request. This aspect of the Manuhiri methodology is important, as essentially the return of research findings to participants is also the returning of mauri to the participants.

Author position:

Green (2018) explores how she positions herself within her research as she is seen as both an insider and outsider when she moves between place and people. In understanding this position, the pūrākau presented at the beginning of this thesis discusses the same notion, in that I am an insider when I am in my own lands of Whangārei but an outsider here in the Waikato region. I am part of the Māori community here in Waikato but have no direct links to Waikato iwi so am an outsider from that perspective. This highlights my own experiences as a valid way to frame the position of this research project but also encourages the need for a Manuhiri methodological approach. Our positionality as Māori shows that we are never excluded from the goals and outcomes of Māori research but rather, they are extensions of our own experiences and observations.

Māori researchers continuously transverse through different spaces and it is understanding our changing roles that informs better approaches to research for our communities. Green (2018) provides insight into why Māori researchers must take care in the construction of our projects as we are always moving in and between communities; but more importantly, that we are always accountable to our own groups and to those we forge relationships with. It is with this understanding that we see the importance of our role in how we not only construct research but also how we implement research projects amongst different communities. Our research projects may have been confirmed while we attended university or other

institutions, but the events that shaped this need for inquiry about the world around us began long before we entered the academic space. This positionality is encouraged through Kaupapa Māori, Pūrākau and Manuhiri methodologies. I have used this position in this thesis to share my own experiences throughout this body of work. Therefore, the reader can expect pūrākau at the beginning of chapters 4, 5 and 6 of thesis as well as a reflective discussion at the end of this thesis.

3.3 Research Questions and Methods

The overall research question for this thesis is:

- *How is kaitiakitanga practiced in urban Kirikiriroa?*

To further support this primary research question a secondary research question was used to ask:

- *How does mana and place influence kaitiakitanga knowledge and its application within the urban space?*

The primary aim of this research is to seek narratives from urban Māori in Kirikiriroa to better inform the articulation of what it means to understand and practice kaitiakitanga. These questions allow an exploration of the rich perspectives about the role of place in shaping our cultural knowledges and practices. Therefore, I have gathered the following data to contribute to answering the research questions:

- Quantitative and qualitative data on urban Māori and kaitiakitanga;
- Mana Whenua and Mātāwaka experiences;
- Data on Māori cultural practices; and
- Data on Māori understandings and engagement with restoration events.

Both Mana Whenua and Mātāwaka groups were able to share their insight about their roles in relation to kaitiakitanga of the urban space. Beyond Kirikiriroa, participants across Aotearoa were able to contribute to the research project through the survey method. This multi-level process of engagement has provided diverse perspectives from these communities about their knowledge of kaitiakitanga.

3.3.1 Triangulation

The process of triangulation was used in this research to provide some structure in how the project would be carried out from the projects inception to the thesis completion. Triangulation provides a way to ensure that all aspects of data collection are undertaken in a logical manner (Carter, Bryant-Lukosius, DiCenso, Blythe & Neville, 2014). By drawing information from multiple sources, triangulation provides an opportunity to understand the phenomena about a particular subject (Carter et al., 2014). For this research, each data method was informed by previous methods of data collection. This allowed cross-referencing between data methods, providing growing understanding of the research data and to ensure that the methods could be tailored to suit varying participants (Carter et al., 2014).

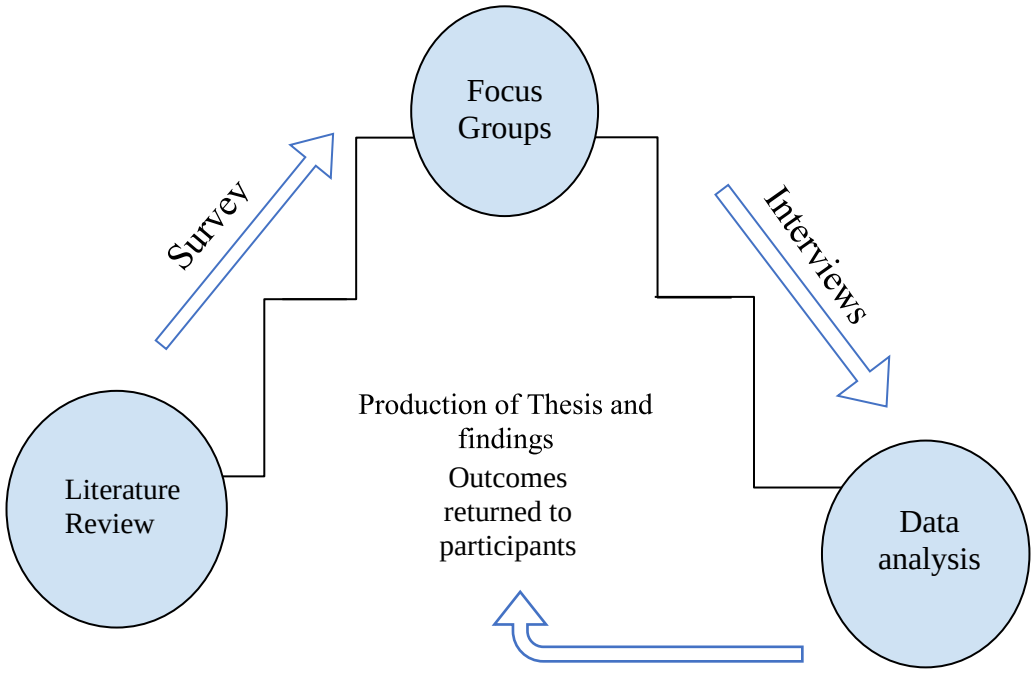


Figure 3.1 - Process of triangulation

The process of triangulation used for data collection in this research project began with the literature review that highlighted the gaps in knowledge which further informed the survey. Data from the survey contributed to the construction of the focus groups and the data from the focus groups contributed to the interview questions. The analysis of this data has produced this thesis and the findings shared with participants.

Figure 3.1 illustrates how I incorporated the triangulation method through the concept of whakapapa to frame the process undertaken for data collection. Beginning with a literature review that scoped relevant literature about subjects related to kaitiakitanga in urban spaces, the review has helped to provide areas of interest for the survey method questions. The survey data was then used to inform the questions for the focus groups but also allowed the construction of a focus group specifically for age groups that had low respondents in the survey like the 55-year-olds and above category. The findings from these focus groups were then used to construct the interview process and collect more in-depth data from participants about key themes that surfaced from both the survey and focus groups. The data

that has surfaced from all methods has been analysed and presented in this thesis. Not only does Figure 3.1 illustrate the research process, it further shows the mauri shared between each data method and the subsequent return of this data to participants. This is integral as part of the Manuhiri methodology.

Using the key themes of Place, Practice, Resources, People and Culture from the literature review, the data chapters present each data set in relation to the overarching theme of that particular chapter. For this reason, the reader can expect to see data from the survey, focus group and interviews culminated in each themed chapter.

3.4 Mixed Methods

This research project required the use of a multimethod approach for collecting data from different places in Aotearoa. A mixed methods research project incorporates both qualitative and quantitative research methods that may fill any potential gaps in the data collection process to ensure a robust response to the research questions (Halcomb & Hickman, 2015; McKim, 2017). Including the mixed methods approach ensures diverse voices and narratives surface through the research data and more importantly that an integrated way to answer the research question is formed. It provides an adequate way to present the narratives of the participants through different mechanisms. Therefore, in this thesis, the reader can expect the use of both qualitative and quantitative data to provide a better perspective of kaitiakitanga practices and understandings in the urban space. These methods of data collection are discussed below.

3.4.1 Literature Review

A review of literature was conducted to identify the possible gaps that this research project could potentially contribute towards. The literature that was reviewed for

the purpose of this research project covered topics such as:

- Environments and Indigenous Peoples;
- Environments, Place, Land and Māori;
- Connection to Land;
- Colonisation and Māori;
- Urban ‘Place’;
- Māori Diaspora;
- Mana Whenua and Mātāwaka;
- Indigenous knowledge;
- Māori values;
- Kaitiakitanga;
- Urban experiences;
- Nature and the urban space;
- Environmental Planning; and
- Ecological science and Mātauranga Māori.

These topics allow a space to critically examine traditional, historic and current knowledge of kaitiakitanga and the urban space. Furthermore, the literature review process provides better insight for the reader into the research topic and its many components. The literature review draws from both international and Māori scholars to illustrate key components of kaitiakitanga, nature, place, knowledge and practice.

3.4.2 Survey

The survey method was used in this research project to gather wider perspectives on kaitiakitanga within the urban space. Surveys align with the Kaupapa Māori and

Pūrākau methodology as it can be seen as an inclusive process for data gathering. The research has utilised the thoughts and data gathered through the survey as a way to present a perspective of kaitiakitanga and areas for further discussion in the focus groups. Respondents of the survey were of Māori and non-Māori heritage.

The survey asked questions about the participants:

- Location;
- Hapū affiliations;
- Engagement with Māori cultural practices;
- Occupation of urban spaces;
- Resource use;
- Engagement with hapū;
- Understandings of kaitiakitanga; and
- Engagement with restoration projects.

The questions were shaped to provide better insight into the research topics but also allowed participants to provide further comments where appropriate (see Appendix 3 for questions used in the survey, Appendix 4 for questions used in the focus groups and Appendix 5 for the interview questions). The survey was constructed using the Qualtrics Software which provided the skeleton model for creating a traditional online survey. The estimated completion time for the survey was 8 minutes and the survey contained a total of 52 questions. Questions were grouped to specific categories and were designed with different features to keep participants engaged. These features included open ended questions, closed ended questions, maps, scales and a question matrix. The survey was distributed through both the networks of the author and the author's supervisory panel. The survey was sent

through email and social media and relied on snowball sampling, where participants forward the survey onto other interested participants who may be suited for the research (Biernacki & Waldorf, 2016; Cohen & Arieli, 2011). The rationale for this type of distribution was to include a diverse group of people rather than solely those of the academic discipline and to also distribute the survey in a timely manner. This need for diversity is important in the Pūrākau methodology and is supported by KMT. This method of participant selection has allowed me to gather wider perspectives on the research topic within a small-time frame. Two hundred and forty-four participants took part in the survey which collected data from a range of participants throughout Aotearoa and abroad. There were 24.78% of participants who identified as male and 74.35% who identified as female. There was 1 respondent who identified as gender fluid and 1 response in the 'prefer not to answer' category.

3.4.3 Focus Groups

The focus groups incorporated the concept of manaakitanga whereby, all participants could participate on their own accord during the focus group. The focus groups used information and themes from the survey to help structure the focus group questions and activities. The focus groups participants were given activities to 'map out' their:

- Current location;
- Distance travelled to gather resources (if applicable);
- Place they practiced kaitiakitanga;
- Understanding of kaitiakitanga; and
- Area they practice other cultural practices.

Participants were given 45 minutes to a 1 hour to complete the activities and contribute to the discussions of the focus groups. Two focus groups were conducted in Kirikiriroa, Aotearoa and gathered the thoughts of fourteen participants in total, about their understandings of kaitiakitanga. Participants were a mixture of Mātāwaka and Mana Whenua individuals who reside within the Kirikiriroa area.

The seven questions for the purpose of the focus groups are listed as:

- Where is home on the map?;
- Where do you currently live?;
- What do you know about kaitiakitanga?;
- Do you practice kaitiakitanga?;
- Do you collect natural resources?;
- How far do you travel?; and
- What are challenges for kaitiakitanga in urban spaces?

Each participant was given the opportunity to write their thoughts on a post-it note and place it on the paper sheets provided or to share their thoughts through in-depth discussions. Map activities were also used in the focus groups where participants used green and gold stickers to pinpoint their current location and areas they associated to ideas of home. The way in which data was collected from participants were altered accordingly to suit the types of participants that were part of the focus group. Therefore, the questions asked to participants were the same but the methods to collect the participants thoughts were executed differently for both focus groups.

3.4.3.1 Focus Group 1

A focus group was undertaken at the Hine e Hine Workshop (HEHW) held at the Meteor in Kirikiriroa, Aotearoa. The focus of the Hine e Hine workshop was to

share projects that encourage the protection of the environment led by women within the Kirikiriroa area. The organisers for the workshop contacted me to undertake a workshop at the HEHW pertaining to kaitiakitanga. With the support of the organisers, I was also able to conduct a focus group whilst also sharing initial findings about the research survey to willing participants. To ensure that the research did not manipulate the answers by the participants, the author asked the questions required for the focus group and then shared the research insights about kaitiakitanga with the focus group 1 participants. Acquiring consent from attendees to participate in the focus group part of the workshop was done by allowing the participants to choose if they would like to participate in the workshop or simply learn through the workshop. By placing their post-it notes onto the paper provided, participants were consenting to be part of the focus group activities. This provided limited pressure to the participants in giving consent to participate but also allowed them to choose which questions they felt comfortable to answer and which they did not. The anonymity of participants was also adhered too as they could further choose to provide their names and contact details. However, all participants, given the nature of the workshop; did not supply their contact details to the author and so their information remains with the HEHW organisers. To ensure that all participants of the first focus group are kept up to date with the research outcomes, strong relationships have been maintained with the organisers of HEHW to support the distribution of the research summary to the attendees of the workshop at a later stage.

By taking participants thoughts but also sharing new emerging data with them, the space created at the HEHW allowed for continued knowledge sharing between both the participants and the researcher. The koha of this information to participants

ensured that they left the workshop with new knowledge to support them in their growing understanding of kaitiakitanga. Ten participants in total were present for the first focus group. All participants of this focus group were female and located or resided in Kirikiriroa. Participants were also of Māori and non-Māori heritage.

3.4.3.2 Focus Group 2

The second focus group for this research project was undertaken at the Rauawaawa Charitable Trust (RCT) on the 6th of November 2019. Contact was made to the Chief Executive of RCT to initiate a relationship to undertake a potential focus group with some of the kaumātua of the trust. I was then required to present a short summary of the research to potential kaumātua and then take part in the kaumātua social day held on Friday the 25th of October 2019 at RCT. This provided me an opportunity to meet kaumātua and share kōrero with them about the research and to further recruit kaumātua for the focus group. Four participants were recruited for this focus group and were over the age of 50. There were 3 male participants and 1 female participant present for the focus group. The group of kaumātua were all Mātāwaka and grew up outside of the Kirikiriroa area.

This focus group began with a karakia to open the day and to set the intentions and expectations for the focus group participants. Each person present, including the researcher, participated in a whakawhanaungatanga activity before the focus group began. This required each person to state their name and where they were from as a way to create a neutral and safe space for the participants and the researcher. Once the whakawhanaungatanga activity concluded, the researcher further discussed the process for the focus group and the questions that would be asked of the participants.

The participants were then given consent forms to sign and told how the focus group would be conducted. Seven questions were used to gather the thoughts of the participants about kaitiakitanga in urban space. The methods used for the kaumātua focus group were altered to allow kaumātua the opportunity to voice their thoughts about each question rather than writing answers on post-it notes. This allowed all participants to voice their thoughts during the focus group which I recorded. Where appropriate, probing questions were used to ensure the thoughts of kaumātua participants were clearly captured. Participants were of Māori descent, with one participant highlighting their connection to Rarotonga.

3.4.4 Interviews

The final stage of data collection was the interview process with those interested from the networks of the author and the author's supervisory panel. The interviews were shaped to encourage a reciprocal flow of information between the participants and the researcher. The interviews were shaped to suit a "whakawhiti kōrero" environment (see Elder & Kersten, 2015), whereby participant and researcher were encouraged to share kōrero during the interview. The interviews allowed a deeper discussion to occur about kaitiakitanga practices in the Kirikiriroa area. The findings from both the survey and focus groups informed prompting questions to be formulated for the interviews.

The participants were given the opportunity to present their thoughts in a safe environment. The interviews covered discussion points such as:

- Kaitiakitanga;
- The cultural practices undertaken by participants;
- The participants connection to place;
- The participants understandings of Mana Whenua and Mātāwaka

The interviews took up to an hour and a half for discussions about the participants understandings of kaitiakitanga and the urban space. The participants were given the opportunity to choose an appropriate venue for the interview process. Each participant was given information about the research and consent forms to sign. Participants were voice recorded during the interviews and this data was analysed. Transcripts of these voice recordings were sent to interested participants to analyse, alter or delete. For this research project, twenty participants were approached to participate in interviews. The individuals that were interviewed for this research were all of Māori decent and had resided in Kirikiriroa. The participants were asked questions about their understanding of kaitiakitanga and how they practiced or did not practice kaitiakitanga in the urban space (see Appendix 5 for the interview questions). Given the sensitive nature of the information shared by the participants, it invokes an urgency to protect this sensitive information from misuse. For this reason, some information has been summarised to still portray the participants ideas without using detailed information that they shared. Specific names and events have been excluded from this thesis but are discussed in a general manner that still portrays the underlying idea shared by participants. In addition, all participants names in this research project have been excluded to protect their anonymity. Their information, transcripts, data, and voice recordings have been stored in a safe place by the author.

3.5 Data Analysis

Different analysis mechanisms were used in this project to draw out key themes and ideas from the data collection methods. In addition, analysis tools were used on the data chapters of the thesis to produce key findings of the research.

3.5.1 Content and Thematic Analysis

Given that this research project employs a mixed method approach, both content and thematic analysis were used as a way to quantify the data provided through the survey, focus groups and interviews. Content analysis is noted by Drisko and Maschi (2015) as being a process to reduce data into key 'codes', while Braun, Clarke, Hayfie and Terry (2019) share the value of thematic analysis in allowing themes to be constructed and redefined to produce more accurate themes in data. For this project, I reduced the participants data into key codes using the NVIVO software. Using NVIVO I was able to 'count' the participants data and produce qualitative findings about key words evident in participants discussions. This produced key themes from the participants discussions to surface. These themes were then defined and redefined as more data was produced by my research methods. These initial themes helped to support more inquiry in the focus groups and interviews.

The survey data was analysed through the Qualtrics and SPSS software to understand relationships between different variables of the survey data. I used Qualtrics and SPSS to cross examine certain variables like age and gender in relation to kaitiakitanga practices. This highlighted underlying influences of kaitiakitanga practices in urban spaces that were not explicitly evident in the initial themes. Both SPSS and Qualtrics allowed statistical analysis of the survey data to understand if the data is statistically significant. I undertook a chi-square test to examine the *p* value of certain data sets from the survey. For this thesis, I have included the APA reference style for the Chi-squared test which is noted as X^2 (Degrees of freedom, N = Sample size) = Chi-square value, p PValue. From this investigation I have included graphs in the data chapters that show relationships

between time spent practicing kaitiakitanga, homeownership, age, contribution to restoration projects, attendance of restoration projects and engagement with local hapū.

3.5.2 Narrative Analysis

Narrative approaches to research often involve the analysis of stories through participants data. Wong and Breheny (2018) state that a narrative approach provides a way to understand the participant and the lived experiences that have shaped their perspectives of the world around them. Through the Pūrākau methodology, a narrative analysis was used to analyse the qualitative data of the surveys, focus groups and interviews. I analysed the similarities and differences in the participants data by using the NVIVO software. Through coding, I was able to draw out key similarities in the participants data to build the narrative of kaitiakitanga in urban spaces. In each data chapter I have used direct quotes from the participants to illustrate the similarities in experience and the new findings in kaitiakitanga experiences in urban spaces. These quotes are contained in tables to show such similarities and differences. Narrative analysis is further supported by the Pūrākau methodology and empowers the stories of participants to surface in the research project. Therefore I have shaped the data chapters in this thesis to be presented in the form of a narrative by attributing overarching themes to frame the presentation of the data.

3.6 Conclusion

Māori research is important to our communities which requires care and consideration in how we create and apply such research within these communities. More importantly, Māori research provides a way to capture diverse realities of our communities and those who reside within them. However, Māori research is fluid

and we must not encourage a romanticised version of engagement. Māori research should further, encourage new ways of research engagement that challenges current understandings of what it means to engage with people in different locations. This chapter has outlined the process undertaken for the research project. Using the foundations set in the introduction, the literature from Chapter 2 as well as the methodological approach sets the position for the following chapters. The next chapter begins our exploration into data gathered from participants of this research project. Chapter 4 focuses on place and uses participants data to show the relationship of place to kaitiakitanga. To conclude this chapter, I revisit the question posed by Linda T Smith which asks, *"What happens to research when the researched become the researchers?"*. This chapter demonstrates the opportunity we have as Indigenous peoples to share narratives of our experiences. By using our own cultural frameworks we can support this process and change how we use research tools to bring these narratives to academic spaces. For this reason we should see research as way to apply rigour to our collection of narratives and ensure that we use the appropriate tools to present clearly, the experiences and knowledges of our communities.

Chapter 4 - Place and Kaitiakitanga

"Perhaps most important, place gathers human and non-human beings together within a phenomenal coherence that allows for engagement, reciprocity, and questioning." (Larsen & Johnson, 2012, p.7)

My connection to place established through Otaika was also important in my journey to understanding kaitiakitanga. This place I call home has shaped my engagement practices with whānau and hapū by reinforcing my obligations to the land and the resources around our home. It has taught me the importance of whānau and whenua through providing sustenance for my spiritual and physical well-being. Most importantly, Otaika has allowed me to inquire into the makings of my own worldview and personal identity, to question the origins and meaning of this worldview and how it interconnects with my perception of self and place. Stories of tūpuna, their interpretations of their environment, their use of local resources are embedded in the landscapes around our home. The protection of these resources, wāhi tapu and landscapes have reinforced the need in me to practice kaitiakitanga so that future generations to come, have an opportunity to connect to Otaika in a similar way. The lived experiences of my tupuna now act as a tool to inform my own understandings of kaitiakitanga to this place, and in accordance with my evolving worldview, it is my obligation to both past and future generations to contribute to this ongoing development of place-based knowledge. My place-based learnings from Otaika help me to navigate new and unfamiliar places like urban Kirikiriroa through recognising sites significance, historic kōrero, local hapū and the importance of nature.

4.1 Introduction

Place-based connections have been maintained by Indigenous people across the world through lineage with nature that intertwines cultural knowledge and practice (Atalay, 2020; Wehi & Wehi, 2010). Nature plays a pivotal role in creating our sense of identity by providing an avenue for increased well-being and health (Keniger et al., 2013; Shanahan et al., 2015). Nature is vital in Indigenous peoples art of placemaking and includes social and cultural needs in everyday life, which are further embedded in our places we occupy (Hes, Mateo-Babiano & Lee, 2020). For Māori, the creation narratives of Ranginui and Papatūānuku help to establish and maintain a relationship to the natural world and provide a way to create meaningful connections for well-being through practices with nature (Rameka, 2017; Roberts, 2013; Walker, 1990; Walker et al., 2019). This creation narrative initiates connections to other beings within nature to establish a relationship to the varying domains of Māori gods such as Tānemahuta and Tangaroa (Rameka, 2018). The relationships established in these domains are built upon a mutual relationship of reciprocity that sees the care and well-being of people and nature shared through sustenance and connection (Walker et al., 2019). Cultural practices such as food harvesting, rongoā collection and the like, help to ensure that these connections are maintained and supported and this type of nature engagement is widely seen in indigenous cultures (Atalay, 2020; Turner & Bhattacharyya, 2016). Furthermore, the transmission of this knowledge is not only reliant on the availability of space and nature but also on the intergenerational relationships that exist between both young and old (Ross, 2016). Moreover, intergenerational knowledge transmission captures place-based connections through oral history and storytelling further safeguarding the passing of this knowledge of place to future generations (Ross, 2016).

When these opportunities for connection are challenged through limited exposure to nature and places of significance, there is potential for connection to place to be hindered (Soga & Gaston, 2016). In recent decades, there has been a migration by Indigenous peoples like Māori into urban areas (Gagné, 2016; Haami, 2018; King et al., 2018; Weaver, 2012). Urbanisation has been known to impact the relationships created with nature that are beneficial for human well-being (Jennings et al., 2017; Razak & Nazir, 2016; Shanahan et al., 2015; Turner, Nakamura & Dinneti, 2004). In addition, the development of urban spaces has often marginalised indigenous voices as such voices are not associated to ideas of modern urban spaces (McGaw, Pieris & Potter, 2011). The lack of inclusion of indigenous voices has meant that many urban spaces are still constructed using western values and narratives (McGaw et al., 2011). Opportunities to engage with nature in urban spaces can be limited which highlights the risk for humans to establish connection to place and maintain our physical and mental well-being (Hartig et al., 2014; Triguero-Mas et al., 2015; Weaver, 2012). Moreover, the lack of diverse spaces that draw on indigenous knowledges further contributes to challenges for increased well-being and opportunities for placemaking within urban areas (McGaw et al., 2011).

The limitation of nature and areas that include indigenous knowledges is accelerated when urban spaces have decreasing patches of nature like native tress and birds due to urban growth and development (Baranyovits, 2017; Wyse et al., 2015), which can be integral for land-based practices like medicinal resource gathering, food harvesting and resource collection for arts. Decreased nature is now evident in Kirikiriroa city where only 1.6% of indigenous vegetation exist due to increased urban development (Clarkson & Kirby, 2016). This vegetation is

important for cultural practices for place connection and its limitation can be potentially harmful for Indigenous peoples in urban areas as well as those who reside in rural areas (Wehi & Wehi, 2010; Weaver, 2012). It further addresses the risk to cultural identity that largely relies on nature which can become absent in urban spaces (Clarkson & Kirby, 2016; Weaver, 2012). These challenges further highlight the obstacles that kaitiakitanga practices may face in urban areas where resources are limited to certain sections of the urban space. This provides the need to better understand how Māori engage with urban nature spaces and the effects this poses on practices of kaitiakitanga. The key aims for this chapter are:

1. To test if there is a relationship between kaitiakitanga practices and opportunities for placemaking in urban places; and
2. To explore ideas of home, migration, childhood, places for kaitiakitanga practice and knowledge within urban settings.

Within this chapter, data from the survey, focus groups and interviews will be explored separately to address the overall aims of this chapter with a final discussion section. Through these aims, this chapter posits that connection to place contributes to practices of kaitiakitanga in urban spaces.

4.2 Methods

An electronic survey, two focus groups and 20 interviews were used to explore place-based connections and relationships to kaitiakitanga. Detailed information about the methods used for data collection can be found in Chapter 3 of this thesis. A copy of the questions used can also be found in the Appendices. NVIVO, Qualtrics and SPSS were used to analyse the data from participants by drawing out themes, quotes, relationships, and statistics that show aspects of place and its

relationship to kaitiakitanga. These aspects are presented in tables and graphs throughout this chapter. In addition, maps were also used to display participants locations, hapū affiliations and names of suburbs.

4.3 Survey Results

There were 244 responses from participants located across urban spaces in Aotearoa. There were responses from male (24.78%), female (74.35%) and gender fluid peoples (.43%). Responses were also gathered from participants aged between 16 and 75 along with perspectives from rural Māori, urban Māori as well as non-Māori participants.

4.3.1 Mapping Ideas of Home

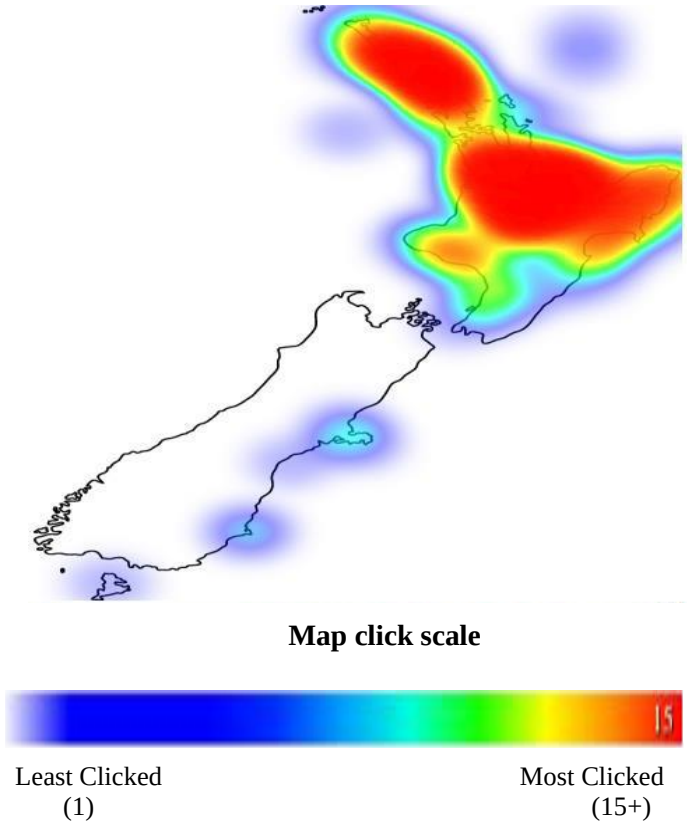


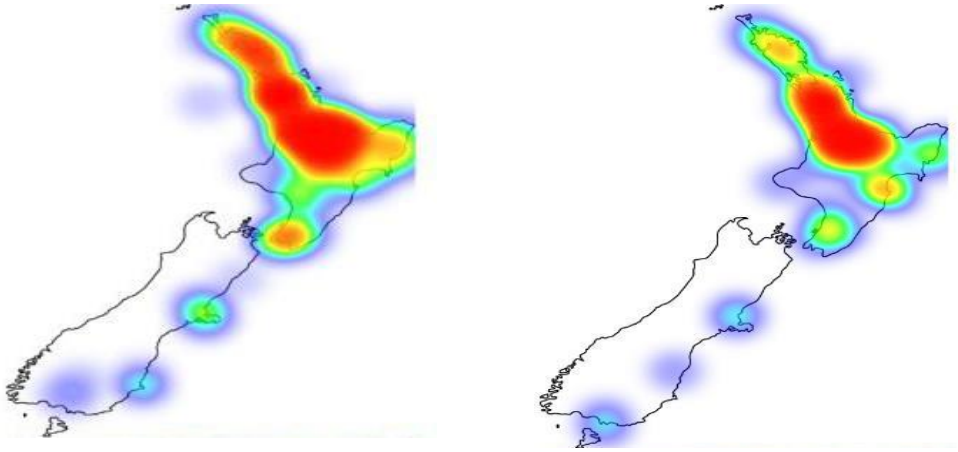
Figure 4.1 - Heat map of Aotearoa

The location of participants hapū is highlighted through the intensity of the colour red. Large areas of red show where participants clicked the most on the map. Most participants showed that their hapū were located in the North Island of Aotearoa.

One hundred and seventy-three participants pinpointed their hapū location on a map of Aotearoa (*Figure 4.1*). Participants listed not only their hapū affiliations but also broader tribal affiliations like iwi, waka and regions. Figure 4.1 provides a visualisation of where the participants affiliations are located with 200 hapū, iwi and waka named by the participants of the survey (see Appendix 6

for more details of these affiliations). The top ten most mentioned affiliations listed by participants were Ngāi Te Rangi, Ngāti Kahungunu, Ngāti Raukawa, Ngāti Hine, Ngāti Maniapoto, Te Arawa, Tainui, Ngāpuhi, Ngāti Porou and Te Parawhau. These tribes are mainly found in the North Island of Aotearoa. There were also responses from non-Māori about their hapū affiliations, with one participant stating that their tribal affiliations connected them to Savaii, Samoa. Other non-Māori participants listed the hapū affiliations of their spouses.

Two thirds (66.3%) of participants reported that they grew up in an urban area in contrast to 33.68% of participants that stated they had lived in a rural area. Of the 66.3% of participants who grew up in urban areas (*Figure 4.2*), 62.4% of participants said they did not move during their childhood while 37.5% said that they had moved during their childhood (*Figure 4.3*). There were 79% of participants who reported that their families were still located in these areas and 20% whose families were no longer located in their childhood areas. Migration by participants have led to most participants still residing in urban areas around Aotearoa.



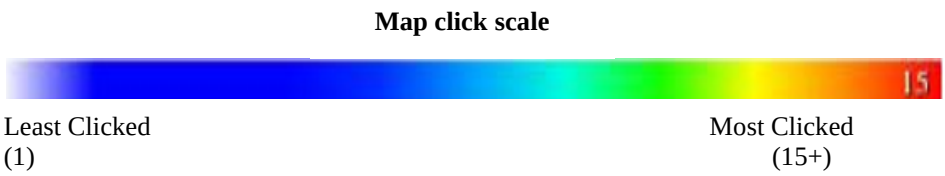


Figure 4.2 - Heat map of childhood places

Most survey participants grew up in the North Island of Aotearoa as indicated on the map. One hundred and eighty-nine responses were gathered for this map with larger red concentrations in the North Island. White areas on the map indicate areas with no responses.

Figure 4.3 - Heat map of participants movements

Movement in the participants childhood shows more concentrations of red in the Waikato/Bay of Plenty region of the North Island. Sixty-three responses were gathered through this map. White areas on the map indicate areas with no responses.

Using urban centres of Aotearoa for participants to select that have large populations of people, respondents from the survey came from Kirikiriroa (28%), Auckland (14%) and Wellington (8%). Areas like Kaitaia (2%), Christchurch (2.6%), Whangārei (4.2%), Nelson (0.53%) and Gisborne (2.6%) had low responses and there were no responses from New Plymouth. There were 36% of respondents who were located in other areas both in Aotearoa and abroad, that were not explicitly stated in the survey (see *Table 4.1*).

Australia	Mangawhai	Ohope	Taneatua
Blenheim	Matakana	Ōtorohanga	Taupō
Cambridge	Moerewa	Palmerston	Tauranga
Canada	Napier	Raglan	Tokoroa
Dunedin	Ngaruawāhia	Rotorua	Tūrangi
England	Kaeo	Sydney	Whakatāne
Foxton	Te Kaha	Tākiwira	Whangamarino

Table 4.1 - Other locations listed by participants.

Participants listed a range of urban spaces in which they reside. Locations include towns and cities both in Aotearoa and abroad.

Table 4.2 contains maps of key urban areas of Aotearoa that allowed the participants to select the suburb in which they were located. In each heat map, there is an outlined red boarder that is indicative of the "urban space" of that particular area. The heat maps within Table 4.2 show concentrations of colour within or in close proximity to the indictive urban space.

Wellington	**Nelson**	**Christchurch**

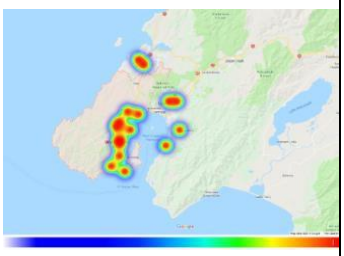
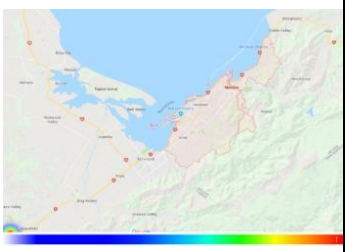

	

Figure 4.4 - Heat map of Wellington	*Figure 4.5 - Heat map of Nelson*	*Figure 4.6 - Heat map of Christchurch*
Multiple suburbs of Wellington are highlighted by the participants with many near the Wellington urban area.	There were no participants located in the urban area of Nelson but one in a rural community in the bottom left corner of the map.	Participants in the Christchurch urban area were spread throughout with many responses located in the southern parts of the city.

Kirikiriroa

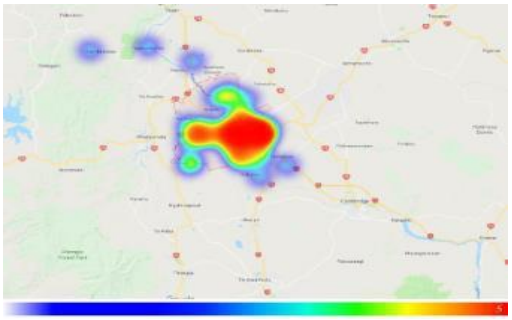


Figure 4.7 - Heat map of Kirikiriroa

There were a large group of participants located in the Kirikiriroa urban area, with some participants located on the outer edge of Kirikiriroa city.

Gisborne

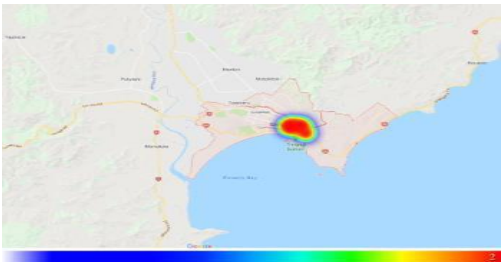


Figure 4.8 - Heat map of Gisborne

Participants were located in central Gisborne. There were no participants located outside of the urban Gisborne area.

Whangārei

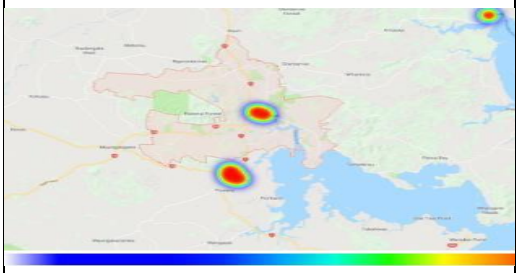


Figure 4.9 - Heat map of Whangārei

There was some concentration of participants in central Whangarei, however there are other participants outside of the urban space that are pin-pointed in the top right corner of the map.

Auckland

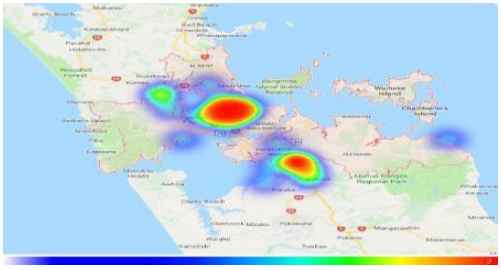


Figure 4.10 - Heat map of Auckland

There were large clusters of participants located in the Auckland area. The maps show concentrations of colour in the northern and southern parts of Auckland. Participants have also pinpointed areas outside of the Auckland urban area.

Kaitaia

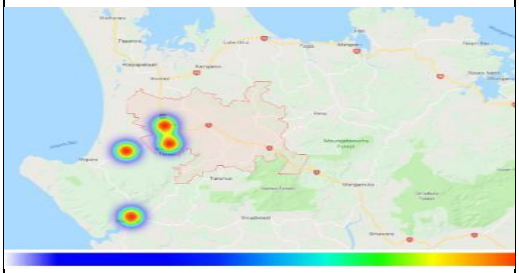


Figure 4.11 - Heat map of Kaitaia

Small pockets of participants were located in the Kaitaia area. The participants are not located in dense urban areas but are spread throughout Kaitaia with some on the outer edges of the urban Kaitaia area.

Map click scale

Least Clicked (1) — Most Clicked (15+)

The colour red on the heat maps indicate one click or more from the participants. The larger the concentration of colour indicates more clicks by the participants.

Table 4.2 - Heat maps of locations in Aotearoa

The heat maps show the participants locations in urban spaces across Aotearoa by locating them by suburbs. Each of the maps has been pinpointed by participants, indicating their approximate location in urban centres of Aotearoa.

Participants were asked what surrounds their homes in these suburbs. The answers reported by participants were largely natural features with some mentions of built features *(Table 4.3*). Participants most often noted trees (23.6%), houses (24.8%) and roads (15.5%) as features that surround their homes (*Table 4.3*). There were some recreational parks (9.3%) located near the participants however, other features like sports fields (6.3%), farms (7.4%), buildings (4.2%) and shops (5%) were sparse in the responses from participants.

Features surrounding participants	**Response rate (%)**
Houses	24.87%
Trees	23.66%
Roads	15.54%
Recreational Parks	9.33%
Farms	7.43%
Sports fields	6.39%
Shops	5.01%
Buildings	4.32%
Other	3.45%
Total	100%

Table 4.3 - Features surroundings participants homes

The responses from the participants about the features surrounding their homes show trees, houses, and roads as having the highest responses.

Respondents' length of occupation of their homes varied; with 23% stating that they had lived in their home for less than a year. There were over 19% of participants that have lived in their homes for 1-2 years, over 15% who have lived in their homes for 3-4 years and participants who have lived in their homes for 5-6 years (4.8%), 7-8 years (3.7%), 9-10 years (5.3%) and 26% residing in their home for more than 11 years. The length of time spent in participants homes is related to participants living situation as 40% rent their homes and 26% own their own homes. There were also participants who live with whānau who rent (10.2%) or own (13.5%) their homes and participants who lived on whānau land (3.7%) or on hapū/trust lands (1%). An 'other' category was also selected by 4.8% of participants where participants noted that they lived in a house owned by a family trust, were renting a house with other people and were boarding at a school.

Upon further analysis relationships were explored between homeownership data and length participants lived in urban spaces. Figure 4.12 indicates that data pertaining to renting and homeownership may have significant effect on the length participants stay in urban areas. Figure 4.12 also highlights that those who own homes are more likely to stay longer lengths in the urban space. Furthermore, the data hints at newly purchased homes by participants as home ownership is also evident in categories 'less than a year' and '1-2 years'. This data is important as it captures levels of migration by participants within urban spaces and the potential to create place attachment through homeownership. Further analysis of those who have lived in urban spaces for more than 11 years shows that female participants make up 80% of responses, male participants 18% and gender diverse being 2% of the responses.

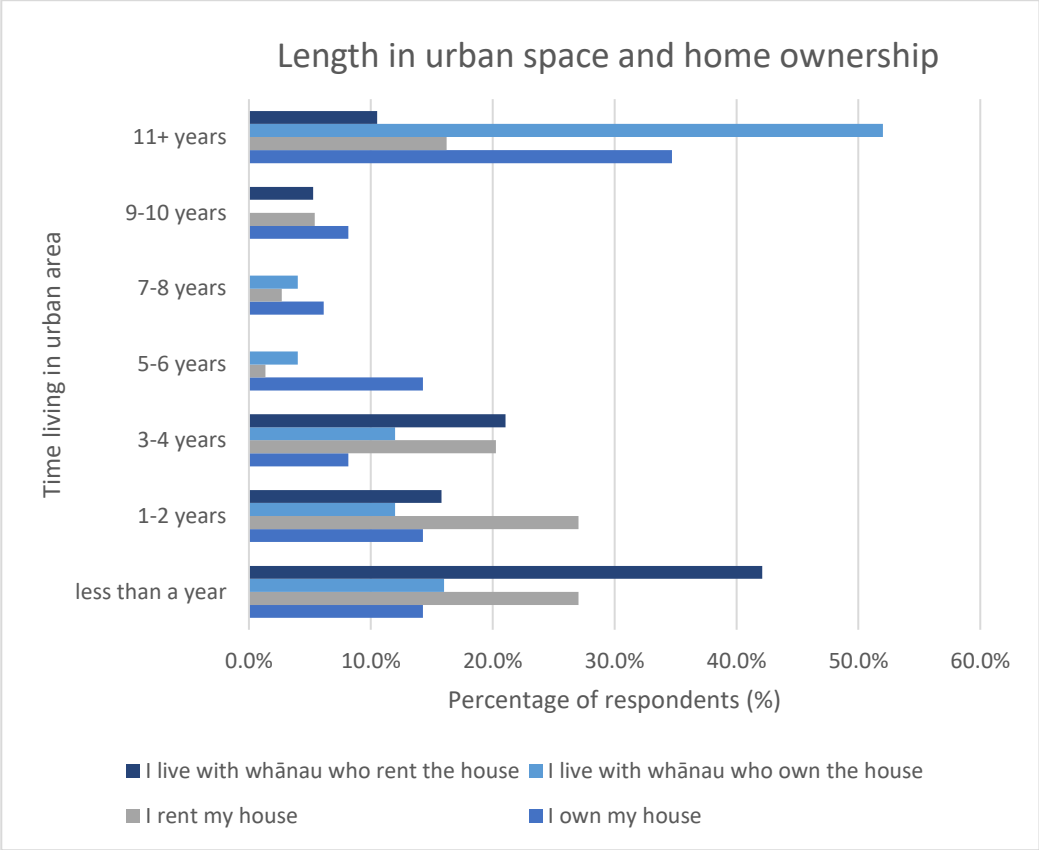


Figure 4.12 - Home ownership and length in urban spaces

The aspect of home ownership and the length that participants have spent in urban spaces varied amongst participants. However there is a significant relationship that exists between homeownership and longer lengths spent living in urban spaces (X^2 (42, N =185) = 58.3, p 0.0489). More importantly, the chart shows a large portion of new homeowners within urban spaces.

4.3.2 Connection to Land

Participants listed the words that they associated to land (*Table 4.4*) with whakapapa being a common theme to describe participants connection to land. Participants also explained how whakapapa allows them to see the natural world as part of them and not abstract from them (*Table 4.4*). This included ideas of tūrangawaewae and Papatūānuku and how Māori are tasked to care for their surroundings through the whakapapa concept. Survey participants also discussed the role of Māori gods in how they articulated their connection to land. Table 4.4 establishes a reliance by participants on Māori terminology and concepts in

describing such connections to land. In addition, Table 4.4 highlights the similarities in describing land connection by both urban and rural participants.

Theme in survey participants discussion	**Quotes by survey participants**	**Urban or Rural participant**
Whakapapa	*"I am connected to the land through the whakapapa of the world as we know it."*	*Urban participant*
	"Whakapapa, whenua and whānau are all kupu that sit in the terms of description of whare tangata."	*Urban participant*
	"My blood heritage and culture connect me to this whenua."	*Urban participant*
	"It's just a normal part of what we do I don't even consciously think about it. It's more of a way of life. We're always trying to be better kaitiaki, or to be good ancestors."	*Rural participant*
	"I understand that I am Māori and that through our connection to Papatūānuku that we are created from the dust. Brought on this journey from te whei ao ki te ao mārama. I enjoy living off the land in our rural community and helping our rural communities and marae to be self-sustainable. Through the land we can share, learn, and cultivate sustainable systems for our people and wider communities."	*Rural participant*
Papatūānuku	*"Papatūānuku nourishes the land all seasons for what we need. Just as much as she gives and provides for us, we need to make sure she is being looked after. Ko te whenua ko ahau, ko ahau te whenua [I am the land, the land is me]."*	*Urban participant*
Exposure to Kaitiakitanga in childhood	*"My dad had a big garden we helped look after it. We were taught not to throw rubbish around and pick rubbish up when we saw it around the streets. We lived around a lot of orchards and trees it was beautiful."*	*Urban participant*

	"I'm from a large whānau and even though not Kāi Tahu we hunted, fished and worked in the maara kai with locals. We cared for the awa/ whenua and took only what was needed."	*Urban participant*
	"I have been exposed to concepts of kaitiakitanga throughout my life. Examples of this is through how to take care of the taiao, marae, hapū, and whānau."	*Urban participant*
Kaitiakitanga and mentors	*"My koroua were kaitiaki of our marae, river and ngahere."*	*Rural participant*
	"My nanny was kaitiaki of our marae, a weaver, farmer."	*Rural participant*
	"I was raised by my karani mā. She lived in town but we went to our 'old home' on our whānau farm every other weekend. Nan would also take us to visit our kaumātua/kuia in different areas outside our hometown. This allowed nan to share kōrero tuku iho, show us places for rongoā etc."	*Urban participant*
	"My grandparents and my trips back to my hapū, marae and whānau taught me."	*Urban participant*
	"Dad taught me about kaitiakitanga by teaching about respecting Tangaroa while diving and collecting kai."	*Urban participant*
	"I was adopted by a Pākehā family but my father was a timber worker, I learned a lot about the bush and the sea."	*Urban participant*

Table 4.4 - Words associated to land

The quotes from the participants shows themes such as whakapapa, Papatūānuku and kaitiakitanga in childhood. The ideas shared by participants showed both similarities and differences between both urban and rural participants.

It was also apparent that kaitiakitanga was taught by varying mentors of the participants, this ranged from elderly grandparents, aunties, and uncles and parents, some of whom did not hold Māori ancestry (*Table 4.4*). More interestingly, Table 4.4 shows common themes surfacing from both urban and rural participants. This could indicate more similarities in kaitiakitanga knowledge and exposure even

across different environments. The respondents of the survey were also asked if they were exposed to kaitiakitanga during their childhood and further, asked to elaborate on their answer. Sixty eight percent of participants confirmed that they were exposed to kaitiakitanga, and when asked to elaborate, provided details of kaitiakitanga which varied from protecting cultural traditions to other practices such as water-based and land-based activities associated with food collection.

4.3.3 Kaitiakitanga and Places for Practice

Answers about places to practice kaitiakitanga	**Response rate (%)**
At my house	36.89%
Marae	28.53%
At a near by park	13.26%
Other - Please explain	16.14%
I don't have a place to practice kaitiakitanga	5.19%
Total	100%

Table 4.5 - Places to practice kaitiakitanga

Home spaces had the highest response rate from participants when asked about the places best suited for kaitiakitanga practices. Both marae and the 'other category' also had high response rates from participants.

Table 4.5 shows data pertaining to places for kaitiakitanga practice where the participants are currently located. The homes (36.8%) of participants, marae (28.5%) and nearby parks (13.2%) were listed as areas most used by participants. There were participants who did not have a place to practice kaitiakitanga (5%) and participants who practiced kaitiakitanga in other (16%) places not listed in the survey. Of the participants that responded to the answer marae, 67.7% were female while 31.3% were male and 1% who identified as gender diverse. Respondents to 'at my house' shared a similar trend with more female responses (73.4%) than male

(25.8%) and gender diverse participants (.8%). The responses in the other category noted areas such as amongst communities, at work, at pā harakeke, near beaches, at kōhanga reo, in mountain areas, in and near rivers, forest areas, on papakāinga, at kura and within participants businesses. There was also mention by participants that kaitiakitanga is practiced everywhere they go.

"Everywhere, little things like picking up rubbish when out and about is normal practise." - Survey participant, 2018

"In my life, wherever I may be, with whom ever I'm with. We can all achieve small steps towards the greater good." - Survey participant, 2018

Thirty five percent did not know how much time they spent practicing kaitiakitanga while 34% said they continuously practiced kaitiakitanga. There were 4.8% who never practice kaitiakitanga and others who practice for 30 minutes a day (12.8%), 1 hour a day (1.8%), 2 hours a day (.6%), half a day each week (1.2%), 1 day a week (1.2%) and more than 2 days each week (7.3%). Time spent practicing kaitiakitanga supports the ideas shared about the places where participants carry out kaitiakitanga. The availability of space to undertake kaitiakitanga may contribute to participants practices being continuous or spread throughout the week. Figure 4.13 reports how time spent practicing kaitiakitanga may differ across age groups. Figure 4.13 shows high responses to the 'I don't know' category across all age groups. More interestingly, the graph also illustrates the growing response rate to the 'always' practicing kaitiakitanga category across all age groups.

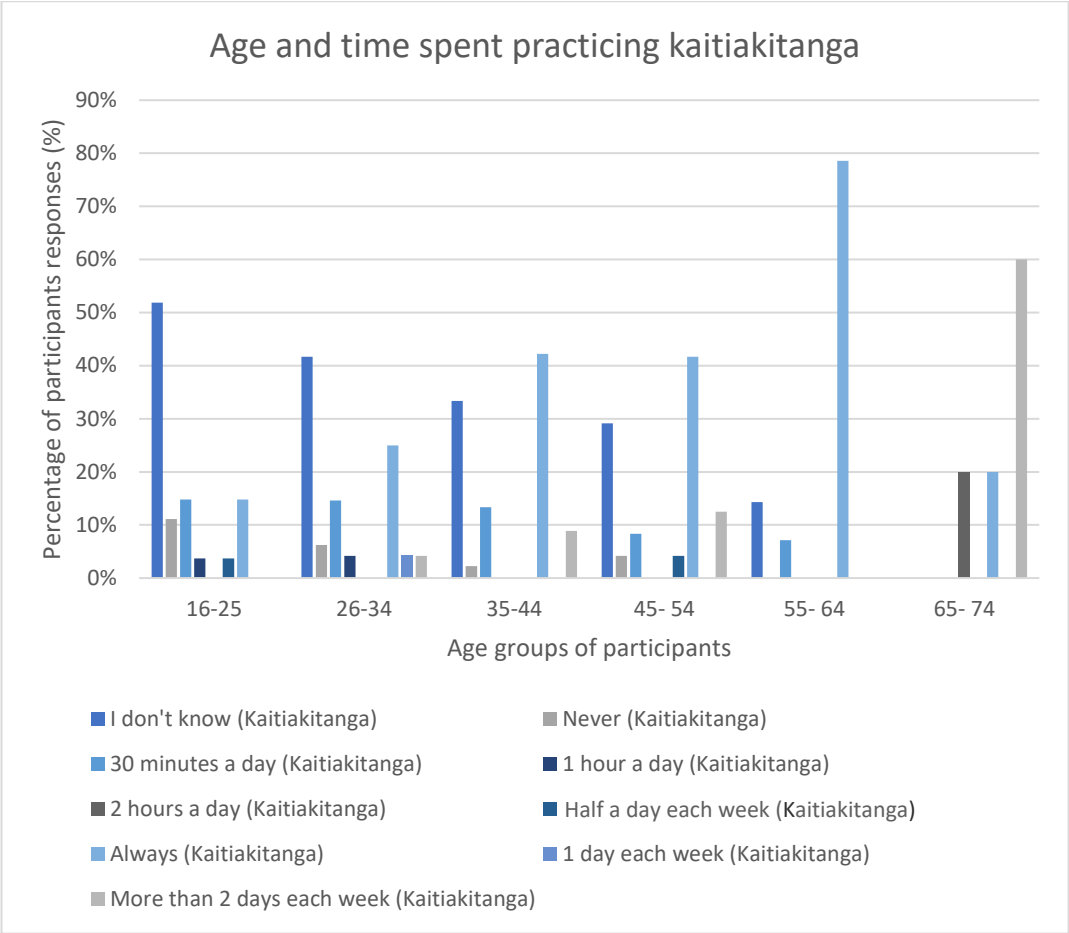


Figure 4.13 - Influence of age and time on kaitiakitanga practices

The responses from participants about time spent practicing kaitiakitanga varied but shows that the category of 'always' increased with age. This indicates that time spent by participants practicing kaitiakitanga was also influenced by the age of participants (X^2 (40, N = 163) = 93.2, p <0.001).

Participants ranked the helpfulness of natural features through answers such as 'I don't know what this is', 'not helpful', 'somewhat helpful', 'helpful' and 'extremely helpful'(see Table 4.6). The data in Table 4.6, although evenly spread in some areas, shows some interesting responses, where 22.6% of respondents that did not know what green spaces were, or the 14.18% who noted gullies as not helpful in practicing kaitiakitanga. The data also indicates that over 50% of participants found green spaces, forest, gullies, rivers, lakes, oceans, animals, and marae as helpful features in practicing kaitiakitanga. More importantly, there were aspects that had large responses in the extremely helpful section, these are rivers

(40%), the ocean (51%), lakes (36%) and marae (45.9%). Responses demonstrate that green spaces were seen as helpful in practicing kaitiakitanga as higher response rates for green spaces were seen in categories of helpful (28.7%) and extremely helpful (21.9%). For forest, responses were also steered towards viewing forest as helpful aspects with over half of the responses for forest captured in helpful (36.6%) and extremely helpful (35.3%).

Question	I don't know what this is	Not Helpful	Somewhat Helpful	Helpful	Extremely Helpful
Green Space	22.60%	5.48%	21.23%	28.77%	21.92%
Forest	2.67%	6.00%	19.33%	36.67%	35.33%
Gullies	8.51%	14.18%	24.11%	28.37%	24.82%
Rivers	2.00%	6.00%	17.33%	34.67%	40.00%
Lakes	2.78%	11.11%	16.67%	33.33%	36.11%
Ocean	2.72%	5.44%	12.93%	27.89%	51.02%
Animals	2.80%	8.39%	23.78%	32.87%	32.17%
Marae	2.03%	4.73%	15.54%	31.76%	45.95%

Table 4.6 - Helpful natural features for kaitiakitanga

Natural features that are extremely helpful for kaitiakitanga practices shows that water contributed significantly to kaitiakitanga practices. In addition cultural spaces like marae and animals were also seen as helpful for kaitiakitanga.

Responses for gullies were also evenly spread between answers such as somewhat helpful (24.1%), helpful (28.3%) and extremely helpful (24.8%). Participants responses for rivers were very high in helpful (34.6%) and extremely helpful (40%); which expresses that rivers are seen as extremely helpful to kaitiakitanga. Lakes also share similarities to rivers and forest with more responses for helpful (33.34%) and extremely helpful (36.1%). Oceans were also similar to lakes, rivers, and forest (helpful, 27.89%; extremely helpful, 51%). This trend was further evident in answers for animals with high responses in helpful (32.87%) and extremely helpful (32.17%). Lastly marae shared further similar trends with high responses in helpful (31.76%) and extremely helpful (45.95%). Although most natural features in this

section captured high responses in the helpful and extremely helpful categories cultural spaces, animals and waterbodies were expressed to be more helpful in undertaking kaitiakitanga practices.

The data has highlighted participants hapū affiliations, where participants live, the length of time they have spent in these places, what surrounds their homes, their living situation, how they describe connections to land, discussions about exposure to kaitiakitanga, as well as places and aspects of kaitiakitanga practices. The data from the survey shows that kaitiakitanga practices can potentially be enhanced when we understand what aspects of nature may increase our practices and knowledge development of kaitiakitanga. Particular places may be more valuable in increasing and supporting practices of kaitiakitanga like our homes and marae. Data about homeownership indicate that this can also be an influencing factor in how long participants live within urban spaces, potentially supporting opportunities to create a sense of home in urban areas. The survey participants data illustrates that places that support higher levels of comfort and safety has the potential to support practice of kaitiakitanga even in urban areas.

4.4 Focus Group Results

The survey data shows aspects of placemaking in urban spaces which can be influenced by our childhood experiences and opportunities to create connections to place through practices and cultural knowledge. Here, the focus group participants share ideas of home, connections to place, nature practices and migration. Fourteen participants in total took part in the focus groups in Kirikiriroa who identified as both Māori and non-Māori who connected to identities of Mana Whenua and Mātāwaka.

4.4.1 Ideas of Home

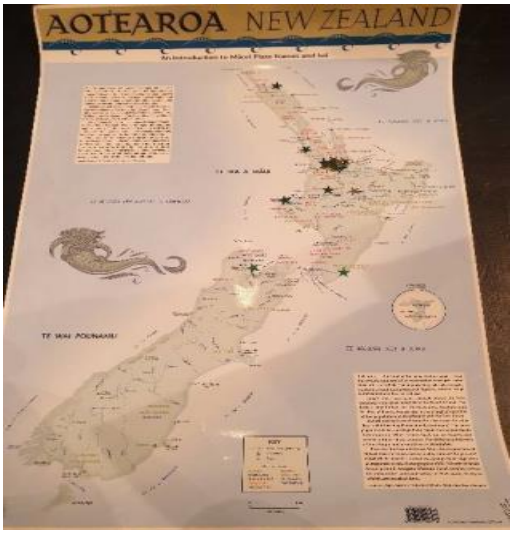


Figure 4.14 - Map of ideas of home by focus group 1

Map activities were used to indicate where participants associated the ideas of home and where they are currently located. Although participants lived in Kirikiriroa some of them shared ideas of home to other parts of Aotearoa.

Figure 4.15 - Map of ideas of home by focus group 2

Most participants from Focus group 2 associated ideas of home to other parts of Aotearoa. There were none that saw Kirikiriroa as expressing strong connections to ideas of home.

Participants from both focus groups were asked to place two stickers on a map of Aotearoa (*Figure 4.14 & 4.15*). Green stickers were used to represent the places where participants associate the idea of home. These green stickers were placed in a range of places on the map of Aotearoa, with stickers from Focus group 1 placed on areas near Matauri bay, Port Waikato, Kirikiriroa, near Taumaranui, New Plymouth, Wairarapa and Nelson. Focus group 2 participants placed their green stickers on Rotorua, Kāwhia, Pipiwai and one who stated they were from Te Moana-nui-a Kiwa.

Participants were then given a gold sticker to indicate where they currently reside. Nine of the 10 Focus group 1 participants placed their stickers in the Kirikiriroa area, with one participant placing their sticker in Taupo. Focus group 2 participants

all stated they lived in Kirikiriroa. The participants also indicated a recognition of home spaces that are not entirely associated to Kirikiriroa this includes places more aligned within their traditional iwi boundaries, or places they associate to home that they may not have lived in like the location of their hapū or marae.

4.4.2 Connecting to Place through Kaitiakitanga

In both focus groups, a connection to place was important in enhancing the participants understanding and practice of kaitiakitanga. Participants were asked what they knew about kaitiakitanga. Participants of Focus group 1 expressed ideas of connection to place, advocating and caring for nature and Māori gods. Participants of Focus group 1 also discussed the cultural and spiritual view of kaitiakitanga (*Table 4.7*).

Focus group	**Knowledge of Kaitiakitanga**	**Quote by focus group participants**
1	Nature, place	*"Earth centred, connection, place-based understanding, nature wisdom."*
	Whakapapa and Māori gods	*"Intergenerational responsibility, whakapapa, connection to Rangi and Papa."*
	Cultural and spiritual view	*"I believe it refers to the connection to the environment from a spiritual and cultural point of view."*
	Advocating for nature	*"He māngai mō te taiao, ngā manu, ngā kararehe, ngā tuna, ngā ngārara [a voice for nature, the birds, the animals, the eels, the bugs]."*
	Relationships to land	*"Kaitiakitanga for me is a set of relationships we have with the whenua."*
	Advocating for nature	*"Advocating for the mauri and mana of the environment."*

2	Care of the environment, practice	*"just looking after the environment, aye like I think like I do vegetable gardens you know and do rongoā those kinds of things."*
	Sustainability	*"Kaitiaki is when they look after their beach and all that, make sure that nobody don't take too much kaimoana, and all that."*
	Childhood places, protection of nature, people and nature dualism	*"The whenua that I grew up on as I recall, has never seen fertiliser, manmade fertiliser. Now that to me tells me, what is on the land is what you are going to eat at the end of the day. But if you put poison on the land that's what you are going to eat at the end of the day."*
	Recognition of future generations	*"I really believe you know we as a Māori, you know we need to look after this resource, because of our mokopuna coming up you know all of that sort of stuff."*
	Planting, gardening, caring for animals, process of nature engagement.	*"it was just really as it was and growing up as a child we were taught by our parents, our great-grandfathers how to plant vegetables and how to look after it and how to kaitiaki of things on your land by looking after it, by feeding the pigs and chickens and stuff like that, and that's all we were taught, to plant and to share the food that you plant, because its nothing better than the appreciation of the seeds and plants the you grew with your own hands and then you share it with the people."*

Table 4.7 - Knowledge of kaitiakitanga

The discussions shared by participants about their knowledge of kaitiakitanga shows common themes such as ideas of whakapapa, care for nature as well as the importance of cultural knowledges. Participants from both focus groups also highlight some differences that could be attributed to age and experience.

In Focus group 2, the participants discussed the role of protecting the environment and monitoring how resources were managed. There was also recognition of childhood places and the significant learnings that participants received from these areas (*Table 4.7*). The connections to place in the focus group data shows the importance of childhood places in growing participants initial understandings of

kaitiakitanga. This development of kaitiakitanga also intertwines whānau knowledge, atua Māori, cultural and spiritual perspectives of nature, whakapapa, and responsibility to both past, present, and future generations (*Table 4.7*).

4.4.3 Nature and Place in Kaitiakitanga Practices

All participants discussed some aspect of nature in supporting how they practice kaitiakitanga. Participants described significant areas in their childhood places that supported their relationship to nature. When asked if the participants practiced kaitiakitanga 13 out of the 14 focus group participants undertook kaitiakitanga practices. These practices varied but most encompassed use, exploration or protection of nature. In Table 4.8 the responses to this question are used here to highlight the presence of nature and place in participants responses.

Focus group	**Nature aspect**	**Quotes from focus group participants**
1	Conservation	*"I practice kaitiakitanga through conservation efforts and also my work on climate action and sharing/applying indigenous values to the work that I do."*
	Taiao Ethical decisions	*"connecting to self, whakapapa, Kaupapa Māori, taiao. Making conscious ethical decisions and living that."*
	Garden Wellbeing	*"I care for the soil in my garden so it provides me with nutrition. I care for my neighbours to help them with their wellbeing."*
2	Ground Nature Seed	*"I maintain this practice to this very day. I don't put poison into my ground, and it might seem like it's growing a little bit slower than normal but that's what nature is about. It's not about you trying to hurry things up, push the button and everything happens. Today everything is push the button and there it is, we do not enjoy, even appreciate when something so tiny out of a seed grows naturally."*

	Garden Vegetable Kai	*"yep growing vegetable gardens and we have 2 litre ice cream containers and we have one for vegetable peelings and fruit peelings and we have one for left-over kai that goes in another one."*

Table 4.8 - Aspects of nature in participants discussion

Aspects of nature were inherent in the participants discussion about kaitiakitanga. The participants expressed the importance of nature practices like gardening in undertaking kaitiakitanga. In addition, nature varied from plants to food sources in the participants discussions.

Participants expressed that teachings from elders in their families and communities are integral to their kaitiakitanga practices today. Participants expressed the value of their childhood practices and engagement with nature in how they viewed the world today and how they express their kaitiakitanga practices in urban Kirikiriroa. The kaitiakitanga practices in Kirikiriroa by the participants intertwine both traditional and modern methods of kaitiakitanga. Evident in the participants discussions is the recognition of knowledges from past generations but also environmentally focussed efforts like conservation efforts, ethical decision making and sustainability initiatives (see *Table 4.7* & *Table 4.8*). The knowledge about kaitiakitanga shows that its expression will differ for all participants and this could also be related to the practices and knowledge of kaitiakitanga associated with their ideas of home.

4.5 Interview Results

In addition to the survey and focus groups, the interview data presents ideas of home, the importance of childhood places and urban experiences in Kirikiriroa. Here, interview participants provide further commentary on the kaitiakitanga knowledges and practices in Kirikiriroa. Twenty participants were interviewed in Kirikiriroa who identified as both Mana Whenua and Mātāwaka and were all of Māori descent.

4.5.1 Ideas of Home

Participants of the interviews were asked to share discussions about themselves and their work. This question allowed the participants to introduce themselves and their experiences over the course of their life. Participants openly shared where they grew up as children which were predominantly in rural areas located outside of the Kirikiriroa city and urban places like Auckland (*Table 4.9*).

Key words	**Quotes from interview participants**	**Mana Whenua or Mātāwaka**
Iwi, Te Whānau ā Apanui, Bay of plenty	*"I hail from the most eastern part of the Eastern Bay of Plenty, a small iwi called Te Whānau ā Apanui."*	Mātāwaka
South Auckland, Polynesian metropolis	*"I grew up in South Auckland, the polynesian metropolis of this far south of the hemisphere."*	Mātāwaka
Te Araroa, Rangitukia, Hicks Bay	*"I grew up on the east coast in Te Araroa until I was thirteen, we had like a two week stint in Rangitukia in between houses and then we moved to Hicks Bay."*	Mātāwaka
Ruatāhuna, Levin	*"Most people think I grew up in like the bush, in Ruatāhuna, but I didn't, I grew up in this small very Pākehā town, Levin."*	Mātāwaka
Kirikiriroa, East Coast, Gisborne, Ngāti Porou	*"I've been living in Kirikiriroa for about 20 years now but grew up on the East Coast, Ngāti Porou, grew up in Gisborne."*	Mātāwaka
Ngāti Mahanga, West Coast, Whatawhata, Kawhia, Ngāti Maniapoto, Rereahu, Waikato	*"from all four corners of Waikato rohe both from Ngāti Mahanga on the West Coast right down through to Whatawhata down to Kāwhia, and then to my mother's side to Ngāti Maniapoto and Rereahu as well."*	Mana Whenua

Table 4.9 - Interview participants ideas of home

Participants shared discussions about where they come from, if they are Mana

Whenua or Mātāwaka as well as discussions about ideas of place. The participants have highlighted different locations around Aotearoa, including their hapū and iwi affiliations.

Evident in the participants discussion of these childhood places was the tribal connections that they held to these areas. Interview participants shared connections to hapū and iwi such as Ngāti Porou, Tūhoe, Te Whānau-ā-Apanui, Ngāpuhi, Tainui, Ngāti Haua, Ngāti Wairere, Ngāti Maniapoto and Ngāti Mahanga *(Table 4.9*). These varied connections express the different spaces that participants grew up in and the level of recognition that they held for their own hapū and iwi.

4.5.2 Kaitiakitanga and Childhood

When probed further about their childhood through the question "did you practice kaitiakitanga as a child?" participants disclosed the importance of their childhood experiences in how they viewed their relationships with the natural world. Almost all of the participants spoke about the kaitiakitanga practices they undertook as children, with some disclosing that they never used the term kaitiakitanga. There were also participants who grew up in urban spaces and still undertook kaitiakitanga practices. Table 4.10 presents discussions shared by participants about their experiences of kaitiakitanga and themes that surface from these discussions.

Kaitiakitanga and childhood theme	**Quotes from interview participants**	**Mana Whenua or Mātāwaka**
Embedded in everyday practice	*"Not that I know that I can think of at the moment but like I suppose for me kaitiakitanga isn't devoid of anything so it's kind of not like an isolated concept....that's kind of embedded in everything that you kind of did growing up in that space. Not until you get older or you're not told explicitly this is kaitiakitanga, this is how you look after the environment or look after something. So I can't think of any kind of experiences, specific experiences."*	Mātāwaka
Embedded in everyday practice, recognition of Māori gods	*"I'd say yes, why its difficult for me to answer because it wasn't explicitly talked about, okay, we're gonna go do kaitiaki stuff now when we were little but I think just in our day to day living. We did. I think one of the benefits of growing up in a rural community is that our attachment to our natural environment is a lot more evident. So our engagement with Tangaroa, engagement with our rivers, our ngahere were just part and parcel of our kind of daily living situation, so in that sense yes."*	Mātāwaka
Protection of resources, knowledge transfer	*"We lived in the city in Kirikiriroa itself, but we were still very much brought up traditionally. So we had big, huge vegetable gardens on the, you know, almost quarter acre section, and my grandfather also lived with us for a while there too so he would grow kūmara in the middle of the city, that sort of stuff too and there was particular things that he would do, relating to growing kūmara. And also the purapura and all those sorts of things."*	Mana Whenua
Sustainability, importance of childhood practices	*"Then growing up too we always had a garden I don't really remember winter gardens but every summer we would have a summer garden with everything, everything you could dream of."*	Mātāwaka

Securing resources for future, protecting mana	*"Yeah in regards to the environment that's how we're kind of brought up. And one of the strong things our father instilled in us was around the retention of our whenua. So he pretty much said whatever whenua, you have mana for want of a better word, or shares or ownership in, make sure that they're never sold."*	Mātāwaka
Sustainable practices	*"So we grew up in a household that was off the grid. So everything we did was recycled, reused, really heavy emphasis on the environment and living in our environment in our means. That's why I don't waste anything, so its ingrained from a young age."*	Mātāwaka
Embedded in everyday practices	*"I don't think at the current form of kaitiakitanga, like the current level of kaitiakitanga that's happening at the moment wasn't as prevalent back then. But living on the coast, I suppose. I'm not sure. Like thinking about it. I don't think like there wasn't a big focus on recycling or you know like water bottles as much as it is today. I don't think it was as prevalent back then as it is today. You know I suppose we weren't as serious about it as today. I don't think we really did. Not purposefully, but just our normal life was just more around eating from the garden every now and then so just grew our own veggies and stuff."*	Mātāwaka
Spiritual connection through water, spiritual practices, respecting whenua	*"So what's coming to mind is being taught how to do yourself with water whenever you go to the awa cause as a child we spent a lot of time at the awa. Nothing seems to come to mind, I think the other thing, like I was brought up around my grandparents' era and other kaumātua so, everything just seemed common sense when you were at the marae or when you were in the natural world. My grandparents always taught me to be respectful with the whenua, everything, everything in the natural world. It was just common sense and being respectful wherever you go, only because I think growing up too, I use to hear some of the stories. So apart from making you a little bit weriweri .....that's what helps make you respectful."*	Mana Whenua

Food gathering, sharing practices, whānau activities	*"Well see growing up I never really thought about that. It's not until you get older that you really start to think about kaitiakitanga. So for us it was going to the beach all the time every summer, and because my dad he's the hunter gatherer man he was the diver. So almost every weekend, because we had a van, we would pick up all the cousins, all the cousins we could fit into the van and we would all go to the beach. Everything for him was about the land, kai from the land so he was the type of fala that would just chuck you in the water."*	Mātāwaka
Securing food, sustaining food resources	*"I think the kaitiaki practices, a lot of it was around kai. Like my grandfather grew kai always and we had rotten corn going and he would eel a lot. But there was always a focus on ensuring that it was like, there was some leftover you know....When they were running in big numbers, they would take the big ones and actually walk them out to the ocean and let them go."*	Mātāwaka
Nature engagement, food gathering, worldview	*"So growing up in Gisborne, the Māori worldview was very much a key influencer in terms of how we lived our lives. We didn't have access to a lot of resource, you know how you would, working in town, in town you could get higher paying jobs. But in Gisborne while it was a city, my parents were only in low skilled types of jobs, they were labouring jobs as well as cleaning jobs and all that type of carry on. So as a result, in order to live well you had to have a bit of subsistence living as well. So that meant having to access resources from the environment, whether it was from the whenua, from the marine environment, which was probably the main environment that we interacted with in order to gain some subsistence, utility value, in order to get some well-being, in order to stay alive, or to improve the well-being. So yeah, sometimes you didn't have food, but bread, noodles and all that type of stuff wasn't available or cheap enough, so you had to go out and get some paua, kinas, crayfish and all that type of stuff, go fishing in order to improve the well-being.*	Mātāwaka

Table 4.10 - Kaitiakitanga and childhood

Discussions by the participants captured ideas about their childhood practices of

kaitiakitanga. Evident in this table are the similarities in practices related to kaitiakitanga but also the important learning opportunities experienced by participants. There are mentions of both physical and spiritual practices that participants undertook in their childhood.

Participants shared many aspects of how they practiced kaitiakitanga as young people (*Table 4.10*). This form of kaitiakitanga was not only related to the environment but also the well-being of people and culture (*Table 4.10*). Participants discussed the need to care for their whānau and hapū whilst protecting nature in childhood areas. These practices ranged from food harvesting, working at the marae, attending hapū and whānau hui, and practicing cultural practices such as karakia which is evident in discussions captured in Table 4.10.

Participants noted that these experiences ensured that in their later years, they were grounded in practices and knowledge important to their whānau and hapū, particularly knowledge related to place such as hapū knowledge. The participants noted their efforts to transfer these skills and relationships to nature to their own children and family members. These practices with nature also informed their need to protect land holdings of their whānau (*Table 4.10*). This need was driven by the want of older generations to have resources available for their future generations but to also preserve ideas of mana related to land in their tribal territories. Moreover, participants noted that often their childhood households were ‘off the grid’ and so many of their daily practices were to support the normal functions of the household such as recycling materials which also emphasised the reliance on natural resources surrounding their homes (*Table 4.10*). Table 4.10 further asserts that although participants may have come from different tribal areas, both Mana Whenua and Mātāwaka interview participants shared similarities in their childhood kaitiakitanga practices.

4.5.3 Historic Narratives about Kirikiriroa

Participants of the interviews were asked if they knew historic narratives about the Kirikiriroa area. Almost all participants knew some historic narratives which ranged from narratives of Te Kīngitanga, land confiscations to detailed discussions about the local hapū and sites of significance such as pā located along the Waikato river. Table 4.11 culminates these ideas to present quotes from the participants and the types of narratives they know about Kirikiriroa. It includes discussions about knowledge of local hapū and kaitiakitanga practices.

Theme about historic knowledge of Kirikiriroa	**Quote from interview participants**	**Mana Whenua or Mātāwaka**
Local sites of significance, important local species	*"you've got like the kererū sites along the Waikato awa and places like Miropiko over on River Road where there was kind of like a big Miro tree where all the kererū use to gather.....and then over at Pukete, so Pukete being the place where they're like, wring out berries."*	Mātāwaka
Hapū stories, kingitanga	*"I know heaps because I worked for Waikato Tainui so the Kingitanga, I know a lot of that kōrero, not all of it, but a lot. Yes I know a bit about the stories about Ruakura, Ngāti Haua, Ngāti Wairere, Ngāti Mahanga and Korokī-kahukura which is all the hapū around this area."*	Mātāwaka
Awa, Rangiriri stories, school programmes	*"I kind of know about, I've heard of some stories about the awa, with Rangiriri but I don't really retain them. We did a holiday programme with the tribe quite a few years ago where I helped out with some primary school kids. They did this whole taiao thing, that was years ago."*	Mātāwaka
Confiscation and war stories	*"I'm certainly aware of the confiscation, the wars and I lived in Ngaruawāhia for a number of years."*	Mātāwaka

Learning through haka	*"Definitely. I know a bit about this place of being in a Waikato based haka group. You're privy to a lot of kōrero."*	Mātāwaka
Ecological history of local area, traditional practices of local area	*"For me, the ethic or the principle of kaitiakitanga ought to be something that guides the way that you live your life and practice kaitiakitanga or look after that natural environment. But then, when you're living in a particular environment, in an urban environment or any type of ecological domain, because we are in Aotearoa, those ecological domains are going to differ in terms of the land-forms and the types of natural resources that are in the area. For example, in this rohe is mostly repo, which was the predominant form of ecological system, or wetlands. And its also a river-based type of system. So the way that you engage in this particular ecological domain may differ slightly, that will inform the type of design that you might carry out. So the stories, the narratives from this rohe ought to inform the way that we carry out development in the area."*	Mātāwaka
Theme about engagement with hapū	**Quotes by interview participants**	**Mana Whenua Mātāwaka**
Dependent on projects	*"At times we have, but not on a regular basis, just depends what sort of projects we have."*	Mana Whenua
Establishing friendships to local hapū	*"I do know certain kōrero about and, bearing in mind again, it's not my place. But I've been fortunate enough to have good friends who were quite very good with their history."*	Mātāwaka
Hapū and influence on kaitiakitanga practice	*"And I suppose that's one of the practices that helps us reconnect and be part of this caring kaitiaki movement yeah, it does impact upon my thoughts about the place and I suppose on my thoughts about my own practice of kaitiaki."*	Mātāwaka

Stronger connection to nature	*"I don't know if it influences. I think because I grew up in a rural area, and you feel that more connected to the environment? Yeah. So I think no matter where I am I still think the same way."*	Mātāwaka
Engagement with hapū to guide projects and practices. Varying hapū engagement, will differ in each region	*"Our organisation does, when we're doing anything, in anyone's backyard we have to consult with hapū so for example, the Karearea where our house is being built that was named by Ngāti Wairere because that's their home space. Equally out at The Base, Mahanga Drive, it was named. And it gets a bit controversial because those two tribes both claim the same territory so it does put the tribe in the middle sometimes. But I will say this about hapū, if you would to go up North for example, and you'd be engaging with hapū, but when your with Waikato though its circumstances differ, it's a lot different, we've got one house, with 33 hapū in it but at least you've got one house to have all your debates and your arguments and your disagreements. So I think there's some context when you go from rohe to rohe, there will be some variations that will occur."*	Mana Whenua
Supportive of hapū initiatives	*"I've got many connections here. Good connections to and many of them are supportive of kaupapa. I know I've been keeping abreast of what's happening out with Ngāti Korokī-Kahukura and they've got honey going and puha and restoration and I think it's awesome and you know, I'd be very supportive of and am supportive of what they're doing. But again there's something in me that tells me my role is you know, generically to support but because it's not my whenua I don't have the right to be kaitiaki funny right? But that's honestly how I feel like oh yeah, I don't want anything polluted. I want to make sure that the resources maintain like I looked at the river, I think to myself...the river is polluted, [I have] kayaked it, walked alongside, enough to see that, you know, there's some damaging effects and I'd support any*	Mātāwaka

	activity to help clean the river up, that needs to be led by the local people who are the kaitiaki."	

Table 4.11 - Knowledge of local history and hapū engagement

Participants expressed their knowledge of local narratives of Kirikiriroa as well as knowledge of local hapū. The knowledge of local hapū varied and showed the different ways participants engaged with hapū ranging from friendships to local events.

These narratives about the Kirikiriroa area helped the participants to become aware of their surroundings and the rich histories of the Waikato people (*Table 4.11*). In addition to knowledge of local histories of Kirikiriroa, participants were also asked if they engaged with local hapū of the Kirikiriroa area. Engagement with local hapū ranged from employment opportunities, involvement with Kura Kaupapa Māori and Kōhanga reo, involvement in kapa haka groups, building friendships with local hapū members and intermarriages into hapū (*Table 4.11*). The stories about the urban space of Kirikiriroa did influence some aspects of the participants kaitiakitanga practices but it did not restrict them entirely in undertaking this practice in Kirikiriroa (*Table 4.11*). Understanding the significant role of local hapū in their area ensured the application of kaitiakitanga was done so in a respectful way by participants. The connection that participants established as young people with the environment also ensured that they could continue to practice their form of kaitiakitanga in urban areas (*Table 4.11*). This meant that some participants weren't physically trying to create a connection to place but were aware of their obligation to nature in general and so would act according to this ideology. In addition, participants were aware of local hapū practices but did not feel the need to alter their practices as they believed their practices were still in the best interest of supporting and caring for nature (*Table 4.11*).

4.6 Discussion

The overall aim of this chapter was to explore how place connection may contribute to the practices of kaitiakitanga in urban areas. This was addressed through two key aims which were:

1. To test if there is a relationship between kaitiakitanga practices and opportunities for placemaking in urban places; and
2. To explore ideas of home, migration, childhood, places for kaitiakitanga practice and knowledge within urban settings.

The data from participants has highlighted key areas of interest about the relationship of place to kaitiakitanga practices. There are similarities that are present in the three data sets that show the significance of place in how we practice kaitiakitanga but more importantly, how such connections may shape kaitiakitanga practices within urban areas. Key findings found in the data of this chapter are the importance of childhood places for informing kaitiakitanga practices (see section 4.6.1), the role of urban places on kaitiakitanga practices (section 4.6.2), the different places we use in urban areas for kaitiakitanga (section 4.6.3) and the important role of nature in how we theorise and apply kaitiakitanga (section 4.6.4).

4.6.1 Importance of Childhood Places

Highlighted by the participants was the strong connection to childhood places and the knowledge and practices that are fostered in these areas. The grounding that participants received from these places grew their connection to nature and subsequently the practice of kaitiakitanga. The data posits that 66% of respondents grew up in urban areas however participants still presented in-depth understandings of kaitiakitanga. This departs from historic narratives of urban Māori being disconnected from cultural knowledges and practice (see Walker, 1990) and

demonstrates ideas of adaptation and cultural flourishment. Interestingly, this type of adaptation is seen in urban spaces across Aotearoa and may be linked to migrating knowledges from rural spaces to urban communities (King et al., 2018; Williams, 2015). Moreover, this finding suggests that cultural knowledges can be developed and maintained in urban spaces which also supports discussions about urbanisation of Māori by Williams (2015). Migration was apparent in the participants data, however this form of migration varied. In the survey, participants were mostly migrating from urban to urban spaces. Whereas some participants of the focus groups and interviews migrated from rural communities to the urban space of Kirikiriroa. This is particularly important as it highlights that migration of Māori to urban spaces may be undertaken in different ways but may still transition important knowledges about kaitiakitanga from childhood spaces into urban spaces. Migration has often been tied to ideas of economic growth and development (Haas, 2010). Migrants are seen as peoples who move to new spaces seeking better opportunities for living (Haas, 2010; Williams, 2015). Participants have indicated that cultural knowledges may also be important in supporting their movements between homelands and urban spaces. Although this migration is undertaken by participants, the survey, focus groups and interviews highlight participants still held knowledge of their childhood places, their hapū and iwi affiliations and the importance of nature to their kaitiakitanga practices and knowledges. The migration of people and knowledges could be happening continuously and may not necessarily be attributed to one case of migration.

Participants discussed the important role of their homelands and the practices of kaitiakitanga that they undertook in these areas. Participants highlighted kaitiakitanga practices undertaken in urban spaces that are informed by traditional

knowledge like the establishment of mārā kumara in urban homes. Although participants expressed varying mechanisms of migration into urban spaces, the traditional kaitiakitanga knowledges were very similar as both captured an inherent need to care and protect ancestral knowledges and practices related to place. This may be a result of kaitiakitanga knowledges being sustained over generations in urban areas. The expression of this knowledge also varied with the need to recognise local hapū mana.

Childhood places played a significant role in informing kaitiakitanga practices of participants from both rural and urban spaces. This form of place-based knowledge has enabled the participants to co-exist with nature in their childhood places but to also create practices that draw from these bodies of knowledge and advocate for the care of their places of significance. These experiences then informed how the participants created relationships to nature but also how they transferred these skills into the urban space of Kirikiriroa. Nature experiences and engagement are particularly important in childhood as they contribute to pro-environmental behaviours that we carry into adulthood (Hand, Freeman, Seddon et al., 2018; Soga & Gaston, 2016). Nature relationships established in our childhood help in creating lifelong nature practices (Soga et al., 2020) and this is evident in the data of the research participants. The participants of this research have shown the value of childhood experiences of nature relationships but also illustrate that these types of connections can be fostered in urban places. Such connections rely on practices with nature like the establishment of urban gardens which can also support the connection of migrant people to place and also the longevity of cultural knowledge (Ghose & Pettygrove, 2014). As with nature, the participants highlighted some cultural spaces such as marae as important areas for the flourishment of

kaitiakitanga. Tapsell (2014) shares the important role of marae in facilitating the sharing of knowledges between old and young generations of Māori. Such sharing has been highlighted by participants as important in their expression and understanding of kaitiakitanga today. This further supports the need for spaces within urban areas to be culturally supportive and ensure the safe expression of kaitiakitanga by urban Māori. Drawing from childhood experiences has ensured that cultural practices can be undertaken in urban places like Kirikiriroa and allow for new connections to place to be forged by participants. Moreover, childhood spaces encourage the investigation into culturally safe spaces to undertake kaitiakitanga in urban areas. The role of our childhood teachings and the locale can substantially contribute to how we view our responsibilities to place as we age and as we migrate to new spaces, as well as contribute to embedding knowledges in place for future generations both urban and rural alike.

4.6.2 Urban Connections

Participants shared that they lived in an urban space and highlighted that their kaitiakitanga practices were still largely nature related and encompassed cultural and spiritual knowledge. More interestingly, these place-based connections were in part, informed by the urban space and intertwine both modern and traditional knowledges. Although urban spaces have been shown to confront ideas of well-being and nature relationships (Jennings et al., 2017), the participants were challenging these ideas by drawing on cultural knowledges to guide their behaviours and create placemaking practices in urban spaces. Using cultural knowledges is important for Indigenous peoples to reconcile with colonial urban spaces (Nejad, Walker & Newhouse, 2020). The importance of Māori cultural knowledges in urban spaces must further be made visible to support the

flourishment of local narratives but also the opportunities for Māori to connect to urban spaces (Matunga, 2013). Moreover, the establishment of such connections asserts the placemaking processes that are being forged by the participants. Hes, Mateo-Babiano and Lee (2020) share that placemaking processes allow people to shape spaces through cultural knowledges and practice. Here, the participants have supported this sentiment but further highlight that such processes can still be undertaken when residing in new tribal boundaries. Participants recognised whakapapa, Māori narratives and places of significance in their urban spaces. This encouraged engagement and recognition of local hapū and historic narratives in how participants undertook their kaitiakitanga practices. This provides participants with opportunities to continue their kaitiakitanga practices but to also remain respectful in how this is undertaken in new tribal areas.

4.6.3 Places for Kaitiakitanga Practice

Places to undertake kaitiakitanga practices also differed but there was an emphasis on the idea of home or cultural spaces in supporting participants practices of kaitiakitanga. There was also recognition of utilising places that allowed the participants to undertake kaitiakitanga in their own time, and in an environment they felt comfortable. The practices of kaitiakitanga were mostly undertaken in places that were of value to the participants like their homes and marae. Williams (2015) highlights this attachment to home spaces by Māori as integral to building not only levels of comfort in their new spaces but also in supporting Māori to seek similar levels of comfort amongst urban Māori communities. Such places can be seen as integral to participants opportunity to place-make in urban areas but also to seek out similar networks of people in urban areas. This is important, as placemaking supports urban dwellers in creating a sense of attachment and

belonging in their new homes (Castillo, 2014). These spaces allowed the participants to carry out their practices in a way that suited them and that also factored in the environment around participants and the resources available to them. This trend was also seen in the focus groups where participants kaitiakitanga practice was used in a way that supported their own needs.

For Focus group 2 participants, gardening and teaching were easier ways for them to care for nature and to continue their kaitiakitanga practices. Similarly, Focus group 1 also undertook practices that were environmentally focussed as well as increasing awareness amongst their communities about environmental issues like climate change. The survey and focus group data also aligned with comments by interview participants about kaitiakitanga being part of day-to-day activities and were not reserved for particular occasions. Rather, the practices of kaitiakitanga were intertwined into nature activities that participants could easily undertake in the safety and comfort of their homes and marae. Although, most participants were located in urban areas they were able to create a form of place connection that intertwines cultural knowledge and practices with nature that are integral to indigenous identity (Wehi & Wehi, 2010). Recognising these efforts shows the importance of cultural knowledge and practices with nature in supporting kaitiakitanga practices in urban spaces. Moreover, it highlights the role that kaitiakitanga can play in creating place-based connections in urban areas.

4.6.4 Nature and Kaitiakitanga

Nature relationships have been discussed as integral to identity, cultural practices, well-being, and increased health outcomes (Keniger et al., 2013; Rameka, 2017; Roberts, 2013; Shanahan et al., 2015; Walker, 1990; Walker et al., 2019). The knowledge that participants held about kaitiakitanga ranged from relationships to

Māori gods, nature, culture, and the Māori spiritual world. The recognition of these aspects supported the participants to express kaitiakitanga practices in ways that aligned with the level of knowledge that participants held. These relationships to nature allowed the participants to merge their cultural understanding in the protection of cultural knowledge, water, and land resources as well as the protection and care of people.

Data pertaining to the participants surroundings also shows the value of certain aspects in supporting kaitiakitanga like rivers, oceans, and marae. Evidence of the importance of water to indigenous communities like Māori have been reflected in efforts for water protection such as Te Waihora by Ngāi Tahu, the Waikato river by Tainui hapū and Lake Omāpere by hapū of Ngāpuhi (Henwood & Henwood, 2011; Memon & Kirk, 2012; Te Aho, 2009). In addition opportunities to protect waterbodies not only reflects the importance of kaitiakitanga but also the synergies that kaitiakitanga shares with rangatiratanga and mana (Jackson, Hepburn & Flack, 2018). The act of protecting waterbodies encourages and invokes aspects of kaitiakitanga as seen in the establishment of restoration projects and taiāpure (see Henwood & Henwood, 2011; Jackson et al., 2018).

These efforts of protection and restoration demonstrate the importance of waterbodies as cultural sites and this is also reflected in the participants data. Moreover, as indigenous identity is reflected in the way Indigenous people engage with nature (Kearney, Brady & Bradley, 2018), strong affinity to water can also be attributed to the relationships that people of Tainui share to the Waikato river (Te Aho, 2009). This affinity may also influence how other tribal people engage with specific sections of nature in new tribal areas. More exploration is needed to understand the importance of waterbodies to kaitiakitanga, but here, these aspects

may point to areas where participants hold strong affinity to kaitiakitanga knowledges and practice related to spirituality that may also be influenced by the culture of local hapū. This was also reflected in answers about aspects that encourage kaitiakitanga like rivers, oceans and marae. The participants have shown that urban spaces are developing their own form of kaitiakitanga practice and understandings of nature that are largely informed by their childhood experiences. It highlights that the types of nature we are exposed to in urban areas can require an adaptation of kaitiakitanga practices but also force us to recognise key parts of nature that may hold stronger affinity for our practices and knowledges. It further prompts recognition of local hapū and their sites of significance in shaping affinity to nature in urban spaces.

The participants of this research project have reported the many ways that kaitiakitanga can be understood, but more importantly, the role of place and nature in aiding in the development of this understanding. The data by participants indicates that place-based connections are integral for kaitiakitanga in both rural and urban childhoods. How we create these connections can be attributed to our access of nature and the knowledge held within our communities and whānau. Furthermore, the participants have expressed the different mechanisms that allow such place-based connections to exist like the recognition of local hapū, the intrinsic connections with nature, cultural knowledges of nature as well as praxis within nature. These features, which were prominent in the participants data encapsulate the core of kaitiakitanga and the opportunities to create strong connections to place and nature within rural and urban spaces. The participants have proven that early connections to ideas of place and access to nature can support the expression of kaitiakitanga even in urban places.

4.7 Conclusion

This chapter has shown how place can significantly affect our practices of kaitiakitanga. It highlights the importance of creating and maintaining connection with nature in our places of importance in order for kaitiakitanga practices to grow and develop. The participants of this research project have displayed how connecting to place and nature can be undertaken in different ways but must involve the recognition of cultural aspects such as whakapapa, mana and narratives of people to allow the practices of kaitiakitanga to evolve. They have also illuminated that we can take with us, the knowledges of our hapū and whānau and use these aspects to support migration and residence within new unfamiliar places through simple acts of gardening, recycling, tohi and karakia. The next chapter builds on this momentum and explores the resources and practices used in urban spaces to support kaitiakitanga.

Chapter 5 - Resource Use and Practice

"Our role as kaitiaki has been passed down through the generations and is carefully rearticulated in hui, wānanga, and every time another development taking place within our territories threatens the integrity of our mother earth, Papatūānuku." (Mutu, 2010, p.14)

At the age of 11 I remember first hearing about the term kaitiakitanga through a school wide restoration project of the Waitaua river in Whangārei. This restoration project began in 2003 which involved a visit to the river to see first-hand its pathway through the Whangārei city and out to the Whangārei harbour. We undertook different initiatives to aid in the restoration of this river including tree planting, river monitoring, educational community events, which all contributed to our overall kaupapa of restoring the mauri to Waitaua. This experience gave me an opportunity to see the different ways that kaitiakitanga can be interpreted and practiced. For this project, we were not only trying to restore the physical waterbody but also the cultural narratives of place and practices with Waitaua. This showed the different ways that kaitiakitanga could be used to support the restoration of mauri but also the restoration of cultural narratives and practice. The cultural narratives ensured that our practices and experiences were of value for our future generations and the knowledge we pass on to them.

5.1 Introduction

Values, concepts, and worldviews are integral in shaping indigenous practices and relationships with nature (Berkes, 2012). Practices with nature have been expressed as essential to the development of identity, cultural knowledge, and connection to place (Appiah-Opoku, 2007; Fitzgerald, 2015; Kearney, Brady & Bradley, 2018). For Indigenous peoples, cultural practices capture these intersecting relationships and provide an understanding about the values of such communities and the kinship relationships shared with nature (Gould, Pai, Muraca & Chan, 2019; Lyver et al., 2008; Thompson, Hill, Ojeda et al., 2020; Wright, 2014). Recognising the many ways that cultural practices are informed acknowledges the importance of practice for knowledge development but also that both work simultaneously to support the other.

Examples of cultural practice by Indigenous peoples are unique to each community ranging from the harvesting of plant species as well as the hunting of Caribou, birds and whales to other forms of practice like prayer and storytelling (Lyver et al., 2008; Thompson, Hill, Ojeda et al., 2020; Wright, 2014). These practices create strong bonds between people and nature, but also support the health of resources and their protection for future generations. Moreover, such connections strengthen the kinship view of nature and inform the appropriate engagement practices with varying kin of the natural world (Gould et al., 2019).

When Indigenous people move away from close knit communities, place-based knowledges and connections, they also migrate such practices and knowledge of resources to new spaces, like urban areas (Grau & Aide, 2007; King et al., 2018). These knowledges and practices merge within the fabric of new urban spaces as seen through practices like community gardens (see Ghose & Pettygrove, 2014)

further highlight the need for urban spaces to factor and support migrant people and the skills and knowledges they bring to urban areas (Pickbourn, 2019; Walker, Berdahl, Lashta, Newhouse & Belanger, 2017). The adaptation of people to urban lifestyles has increased the need to ensure that urban spaces reflect the people who reside within them (Matunga, 2013; Nejad, Walker & Newhouse, 2020; Walker et al., 2017). Opportunities to support this visibility of Indigenous peoples through maintaining cultural connections and practices with nature in urban spaces has become complicated by environmental degradation and the large focus afforded to ecosystem functions (Cuerrier et al., 2015; Jackson & Ormsby, 2017). Those who move into new tribal areas may find challenges in maintaining practices with particular resources, the cultural norms of other tribes and limited spaces to carryout cultural practices (Walker et al., 2019).

Along with these challenges for urban dwellers, urban spaces have experienced increased biodiversity loss due to land transformation as a consequence of urban growth (Shochat, Lerman, Anderies, Warren & Charles, 2010). This accelerated loss of biodiversity in urban areas has initiated efforts for ecosystem restoration with remnant patches of nature in urban spaces (Clarkson, Wehi & Brabyn, 2007). This loss of biodiversity has ignited the restoration of natural ecosystems with efforts of restoration undertaken globally and across Aotearoa by a largely volunteer workforce of 600 environmental groups (Peters et al., 2015). Such groups have used ideas of stewardship, care and protection to drive restoration projects in their respective regions drawing from environmental, social and economic objectives to shape restoration activities (Peters et al., 2015). Restoration activities support the needs of biodiversity but can also enhance opportunities to support environmental and social justice, even within urban areas (Palomar, 2010).

In addition to supporting social and environmental justice, there is now a growing recognition to draw from cultural knowledge to help enhance efforts of restoration in urban spaces while supporting opportunities for the expression of cultural practice, the longevity of knowledge systems and the increased well-being of both nature and people (Hall et al., 2021; Henwood, Moewaka-Barnes, Brockbank et al., 2016; Morishige, Andrade, Pascua et al., 2018; Walker et al., 2019).

More than 80 percent of Māori now reside in urban spaces in Aotearoa (Gagné, 2016; Kukutai, 2013; Meredith, 2015). Because Indigenous people share strong connections to place, the ability to connect with remnant ecosystems is not only challenged because of the decreasing availability of such areas but also contested due to the limited understanding of how to create such connections in new tribal boundaries. Māori residing in urban spaces bring with them traditional and tribal practices, with some associated to kaitiakitanga, into one urban space (King et al., 2018). These practices and associated resources are yet to be examined for their potential to enhance connections to nature and opportunities for restoring urban nature. This chapter explores how resources and practices are being undertaken in urban spaces by both Mana Whenua and Mātāwaka. To achieve this, the chapter uses two key aims which are to:

1. Understand the role of resources and practices that are used by participants in urban spaces; and
2. Understand what influences engagement of participants in restoration projects.

To address the aims of this chapter data from the survey, focus groups and interviews will be explored separately with a final discussion section. The overall goal of this chapter is to demonstrate the value of kaitiakitanga in the protection of resources and the expression of practice in urban spaces.

5.2 Methods

Information about the survey, focus groups and interviews used to gather data from participants can be found in Chapter 3 of this thesis. The reader can also find the questions used for each of these methods in Appendix 3, 4 and 5. NVIVO was used for this data to present key words that were frequently mentioned by the participants like the resources they used and collected the most. NVIVO was used to analyses this list of resources to produce the 10 frequently mentioned resources for each category. Tables and graphs have been incorporated into this chapter to present lists, themes, quotes and statistics pertaining to data from the participants. Qualtrics was used to analyses relationships between variables through a chi-squared test.

5.3 Survey Results

The survey data contained in this section culminates responses about resource use, culture and kaitiakitanga practices and engagement with restoration events in Aotearoa.

5.3.1 Cultural Practices

Acronyms	
NCNS	Not confident and need support
IRPT	I rarely practice this
IPTS	I practices this sometimes
IPTO	I practice this often
IDKW	I don't know what this is
IE	I am an expert in this
IKDP	I know what this is but I don't do it

Table 5.1 - Acronyms for level of comfort

The acronyms contained in this table can be used to interpret data related to participants level of confidence in undertaking cultural practices.

The respondents to the survey were asked about their ability to undertake practices related to Māori culture. Survey respondents were asked how comfortable they were in undertaking different cultural practices to gage the possible levels of knowledge held by participants (see *Figure 5.1*). These practices are outlined as; karakia, waiata, whaikōrero, karanga, working in gardens, rongoā, mirimiri, protecting land and storytelling.

Respondents were given seven potential answers to assess their level of comfort in practicing each of these cultural aspects, with answers ranging from not confident and need support (NCNS), I rarely practice this (IRPT), I practices this sometimes (IPTS), I practice this often (IPTO), I don't know what this is (IDKW), I am an expert in this (IE) and I know what this is but I don't do it (IKDP) (see *Table 5.1* for acronyms). For karakia, most participants were aware of the practice and undertook the practice sometimes or as often as they could (IPTS, 33.1%; IPTO, 39.8%. see *Figure 5.1*). Awareness and variance in practice was also evident in responses for waiata (IPTS, 26.4%; IPTO, 46.6%. see *Figure 5.1*). These responses

indicate that waiata and karakia are commonly used practices by the participants and are also widely known by the participants.

For whaikōrero, participants responses reported that they were aware of the practice but did not undertake whaikōrero often (IKDP, 38.38%. see *Figure 5.1*). Similarly, karanga responses also highlighted general awareness of the practice but participants weren't inclined to undertaking karanga often (IKDP, 43.5%. see *Figure 5.1*). Both karanga and whaikōrero show strong recognition by the participants of both practices but that participants may not undertake these practices often. Working in gardens was a practice that varied in participants responses and participants undertook this practice every so often (*Figure 5.1*). Responses for working in gardens indicates varying levels of engagement with this practice.

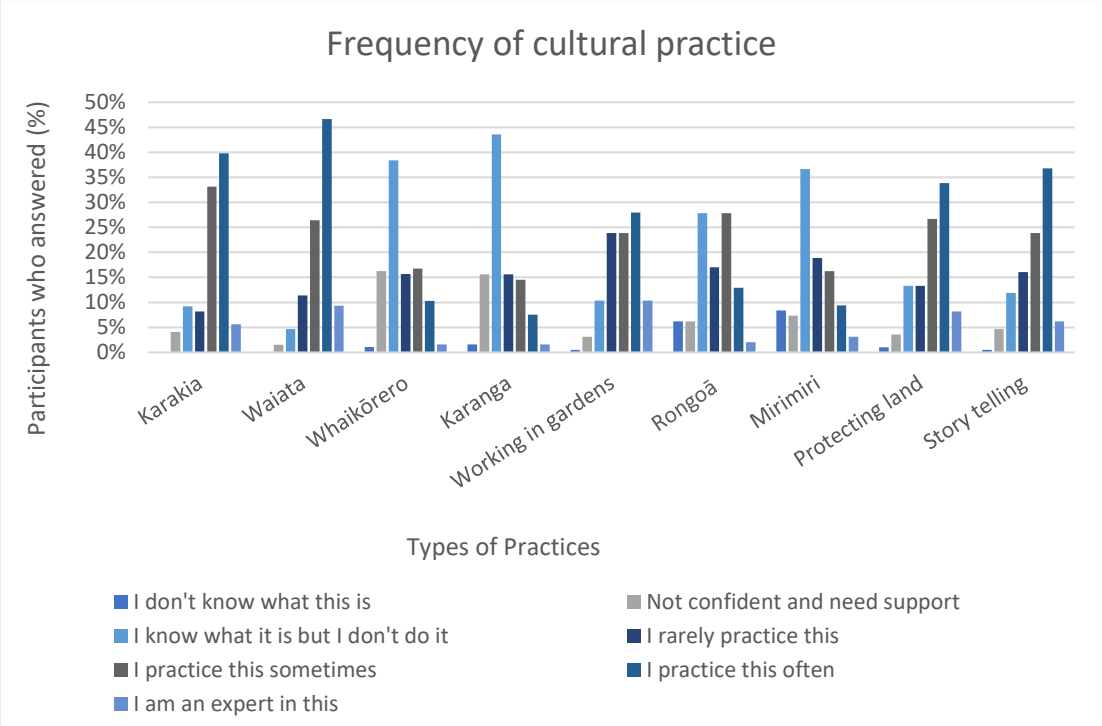


Figure 5.1 - Frequency of cultural practices

Responses from participants about the frequency of undertaking cultural practices shows karakia, waiata, storytelling and protecting land had the highest responses in the practice often category. Moreover, participants show a general awareness of cultural practices but may not carryout cultural practices often.

Responses for rongoā highlight low responses by experts of rongoā (IE, 2%) with

most participants highlighting a general awareness of the practice and varied undertaking of rongoā practices (*Figure 5.1*). Similarly, mirimiri also had low experts (IE, 3.14%) but shows that most participants were aware of the practice itself (IKDP, 36.65%. see *Figure 5.1*). However, responses for protecting land listed that participants practiced this often (IPTO, 33.85%), which were also similar to responses for storytelling (IPTS, 23.83%; IPTO, 36.79%. see *Figure 5.1*). Overall the participants seem to share a general awareness of cultural practices, but the frequency in undertaking such practices fluctuated depending on the type of practice.

Figure 5.1 indicates that waiata was the cultural practice that was undertaken often by the participants with a response rate of 46% in the practiced often category. Karakia had a response rate of 39% followed closely by storytelling with a response rate of 36% in the practiced often category. The protection of land was also an area which was practiced often by the participants with a response rate of 33.85%. These oral forms of practice are often seen through events such as pōhiri, hui, tangihanga and wānanga.

Through further analysis, responses by both male and female vary across practices such as karakia, waiata, storytelling and protecting land. Of the 46% of participants that practiced waiata often, female participants made up 75.6% of this groups while 23.3% were male participants, and over 1% identified as gender fluid. Similarly, the 39% of respondents who practiced karakia often were made up of 79.7% female participants, 20.5% male participants and 6.6% gender fluid. Female participants also made up 64.8% of the responses for practicing storytelling often with 33.8% being male participants. This trend of gender was also evident in the 33.8% who practiced protecting land often, where female participants made up 69.7% of

responses and male participants made up 28.8% of participants. The data demonstrates that such practices may not be influenced by gender but rather are practices undertaken freely by different genders.

There were low numbers of respondents who identified themselves as experts in all cultural practices listed which suggest there were a low number of respondents who carry out these practices enough to hold higher forms of knowledge on these subjects. However, for both karanga and whaikōrero, gender could be an influencing factor in expertise for these practices. Karanga received a low response rate in the IE category however, female participants made up 100% of the responses for this category. For whaikōrero, 66.7% of participants who saw themselves as experts were male participants. There is a high likeliness of gender to be a determining factor in expertise for karanga and whaikōrero (karanga X^2 (12, N = 186) = 35.9, p <0.0003 and whaikōrero X^2 (12, N = 185) = 26, p 0.0107).

Whaikōrero and karanga were also cultural practices that had high response rates where participants knew about the practice but did not practice often. This could be related to these practices being undertaken by individuals who use Te reo Māori, or that the practices of whaikōrero and karanga were reserved for specific times and so would be used for a particular event and space. Interestingly, there were low responses in the ‘not confident, need support’ category for all cultural practices except karanga and whaikōrero which may further show levels of confidence but limited opportunities to practice this cultural practice consistently.

5.3.2 Resource Use

Respondents to the survey were asked if they used natural resources in their area and over 63% indicated yes while 36% indicated they did not use natural resources.

Of the participants who responded to this question, 58.3% of male participants stated that they used natural resources, with 41.7% male participants stating that they did not use natural resources. Whereas 65.4% of females stated yes to natural resource use and 34.6% stating no. For those who responded yes, they were asked about the types of resources that they collected for specific purposes which were outlined as being; medicinal plants, land foods, water foods, arts and crafts resources, carving woods and other resources that may not fit into the listed groups.

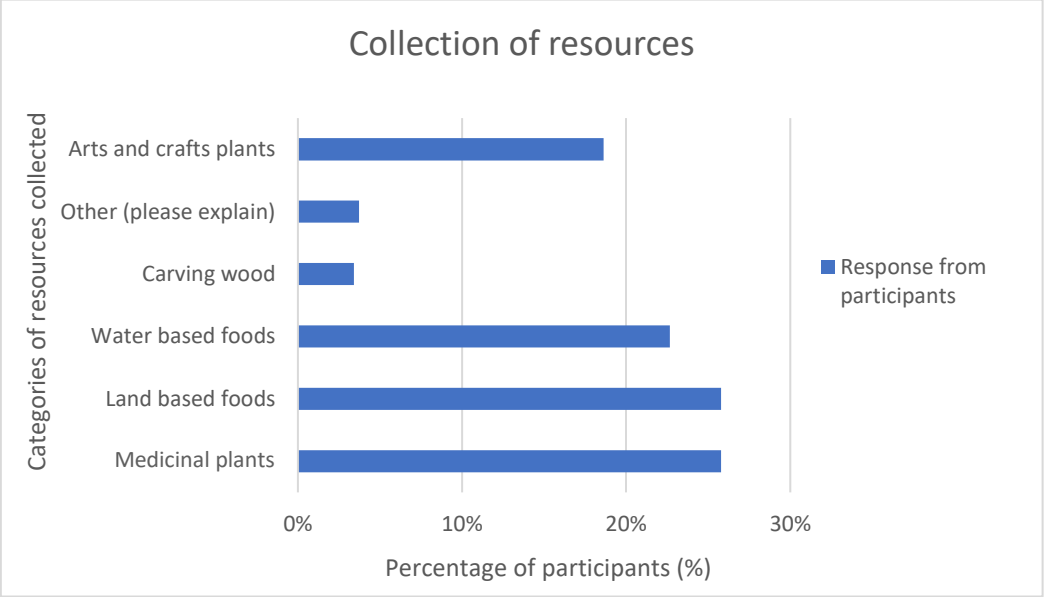


Figure 5.2 - Resource collection

Resource collection by participants shows that both land based-foods and medicinal plants were the most common resources that were acquired by participants. In addition, water-based foods were also resources that participants likely collected.

Participants resource collection varied where 25.78% acquired medicinal plants, 25.78% collected land-based foods, 22.67% for water-based foods, 3.42% for carving woods, 18.63% for arts and crafts plants as well as 3.73% in the ‘other” category. Figure 5.2 illustrates that both land-based foods and medicinal plants were the resources collected most by the participants. Table 5.2 presents the top ten frequently mentioned resources listed by participants for each category. The full list

of resources used by participants can be found in the appendices (see *Appendix 7, 8, 9 & 10*).

Resource type	**Resources**	**Parts of the resource that is used**	**Native or introduced to New Zealand**
Medicinal plants	Kawakawa	Leaves	Native
	Kūmarahou	Leaves, flower	Native
	Kopakopa	Leaves	Native
	Tātarāmoa	Leaves	Native
	Harakeke	Leaves, flower	Native
	Karamū	Leaves , branch	Native
	Koromiko	Leaves	Native
	Lavender	Flower	Introduced
	Mānuka	Leaves, flower	Native
	Tūpākihi	Leaves	Native
Land based foods	Pūhā	Whole plant	Native
	Beef	Meat	Introduced
	Watercress	Whole plant	Native
	Herbs	Leaves	Introduced
	Kūmara	Whole potato	Native
	Mutton	Meat	Introduced
	Cabbage	Whole plant	Introduced
	Feijoas	Fruits	Introduced
	Kale	Leaves	Introduced
	Mint	Leaves	Introduced
Water based foods	Watercress	Whole plant	Native
	Pipi	Meat inside the shell	Native
	Pāua	Meat inside the shell	Native
	Kina	Row	Native
	Tuna	Meat	Native
	Tuangi	Meat inside the shell	Native
	Kūtai	Meat inside the shell	Native
	Kōura	Meat inside the shell	Native
	Oysters	Meat inside the shell	Native
Arts and crafts resources	Harakeke	Whole plant	Native
	Kōrari	Stem (Part of the harakeke plant)	Native
	Feathers	Feathers	Introduced or native
	Pīngao	Leaves	Native
	Houhi	Bark, leaves	Native
	Hue	Gourd	Native

	Kiekie	Leaves	Native
	Muka	Fibre (part of harakeke plant)	Native
	Nīkau	Leave, pith	Native
Carving woods	Mānuka	Wood	Native
	Tōtara	Wood	Native
	Pūriri	Wood	Native
	Rimu	Wood	Native
Other	Eggs	Food	Introduced
	Driftwood	Wood	Introduced
	Harakeke	(see above)	Native
	Beehives	Honey, comb	Introduced
	Kōwhai	Flower	Native
	Pīngao	(see above)	Native
	Shells	Shell	Native
	Twine	Twine	Introduced
	Containers	Containers	Introduced

Table 5.2 - Resources collected by participants

Participants listed the names of resources that they collected. The most frequently mentioned resources for each category by participants are shared in this table. These resources are not only traditional plants species but there are also non-traditional species listed like feijoas, lavender, herbs and kale among others.

The medicinal resource list illustrates that most resources used by participants were predominately found on land (see *Appendix 11* for scientific names of resources collected by participants). The most frequently mentioned medicinal plant was kawakawa (*Table 5.2*). There were also frequent mentions of other medicinal plants such as kūmarahou, koromiko, karamū and mānuka, which are predominately land-based medicinal plants (*Table 5.2*). Other plant species like lavender were also listed as a medicinal plant by participants and one mention of karengo (seaweed) in the medicinal list.

Land based foods shared a similar trend to medicinal plants with low mentions of traditional Māori land-based foods such as pikopiko and karaka berries and more inclusion of modern/ western foods like herbs, cabbage and kale (*Table 5.2*). There were mentions of wild animals as food sources by the participants such as wild pigs, and livestock such as cows (*Table 5.2*). The resources associated with water were

mostly seen as common foods such as kina, pāua and varied species of fish (*Table 5.2*). Most of the foods that participants did list however, are located near the seashore, suggesting that accessibility may also affect what respondents harvest from water sources. Participants were also asked if they collected carving woods. There were limited responses for this category which could suggest that limited practices using carving woods existed in the urban space (*Table 5.2*). Furthermore, participants were quizzed about their use of resources for the purposes of creating arts and crafts.

Most participants mentioned the use of harakeke due to its versatility (*Table 5.2*). Different parts of the harakeke plant were also named as arts/crafts resources like kōrari and muka, suggesting that each part of the plant served a different purpose. Participants further included both natural and non-natural resources as responses to the arts and crafts question like recycled plastic materials (*Table 5.2*). These responses indicate that resources were gathered for different purposes such as upcycling initiatives and traditional weaving practices, which further supports ideas of sustainability.

The data from the survey highlights that resources gathered by participants were used for food and medicinal purposes, furthermore, these resources were mostly for personal use. It was unclear from the survey data if some participants used these resources for commercial reasons, however, the majority commented on using resources for their own personal well-being. Mobility also played a role in how participants collected their resources as some would travel outside of the urban space to collect natural resources and return them to the urban space. There was a need for some participants to be supported in their collection of resources, whether through karakia or the support of senior people in their community.

"We grew up in Maketu, did karakia before kai, collecting kaimoana and hunting, we also were heavily entrenched in the marae and constantly travelled to Rotorua." - Survey participant, 2018

"The only one I am comfortable with collecting is makomako. The others just don't feel right, unless I'm with a senior person." - Survey participant, 2018

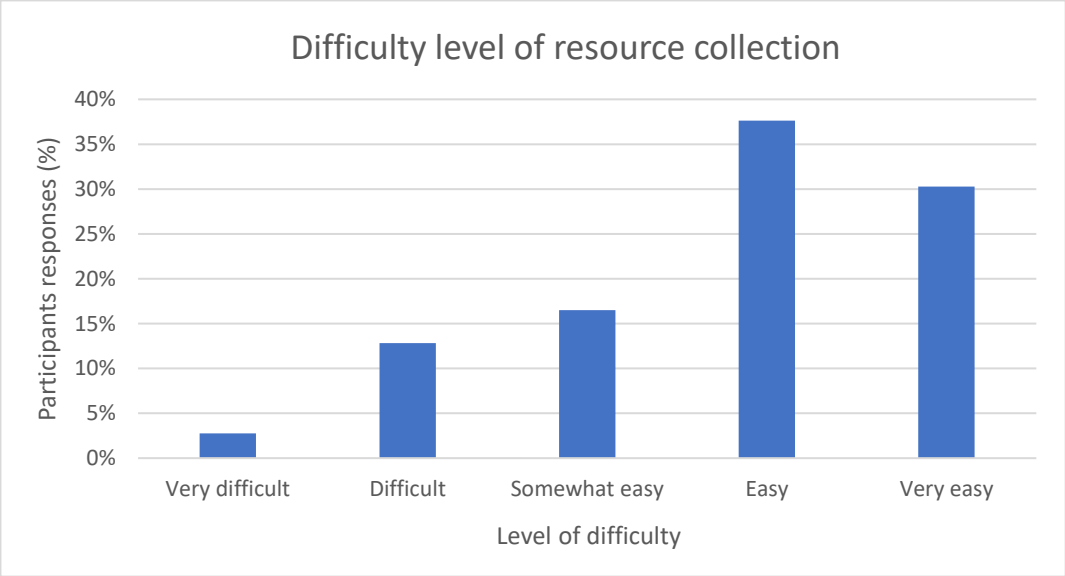


Figure 5.3 - Level of difficulty for resource collection

The collection of resources by participants was listed as fairly easy to undertake. Participants responses for resource collection shows more responses in the very easy and easy categories.

When asked how easy natural resources were to collect on a scale of 1 to 5, with 5 being extremely easy, respondents noted that these resources were relatively easy to collect with 30% indicating their resources were very easy to collect (*Figure 5.3*). Moreover answers in this question saw responses for easy (37.6%), somewhat easy (16.5%), difficult (12.8%) and very difficult (2.7%).

Data gathered about participants maintenance and restoration of resources is expressed in Figure 5.4 with the highest responses seen in medicinal plants (17.8%), land-based resources (28%) and fresh water-based resources (18.8%). Over 13% of

participants shared that they did not restore or maintain resources that were listed in the survey while 5.6% of participants listed 'other' resources they restored or maintained (*Figure 5.4*). This shares similarities to the data about resource collection which suggests that participants both harvest and restore natural resources that are accessible to them and are of importance for particular practices.

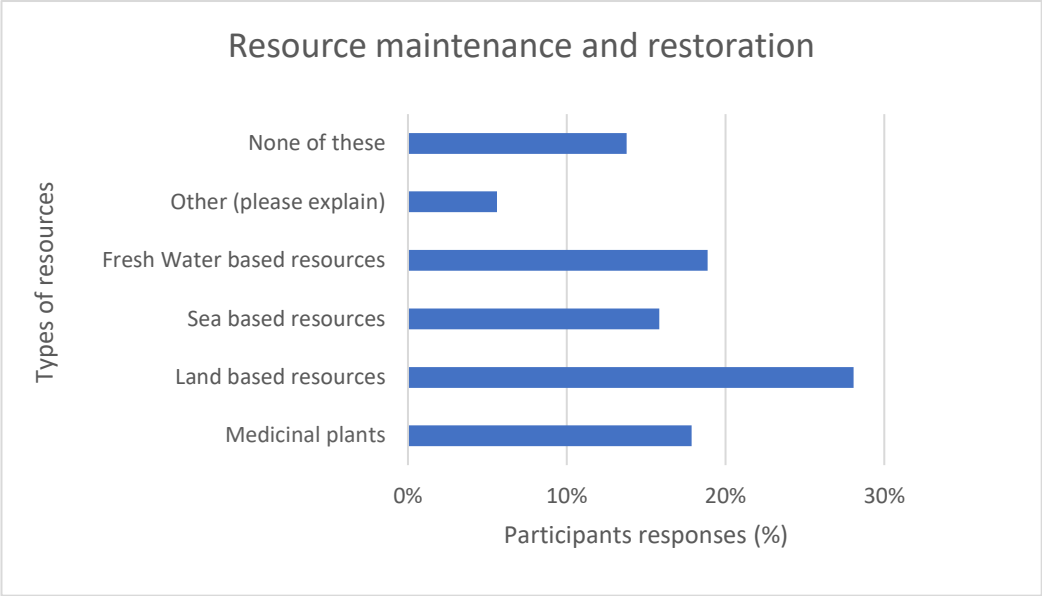


Figure 5.4 - Maintenance and restoration of resources

The figure shows what resources participants maintained or restored. The chart shows land-based resources to have the highest response from participants, followed by freshwater resources.

Delving further into the restoration and maintenance of resources, Figure 5.5 demonstrates how each age group of the participants contributes to restoration with answers about contributions listed as funding, labour, land use, cultural guidance, tree planting, species protection, administration tasks and an 'other' category. In each age group certain practices like labour, tree planting and cultural guidance have a large presence in the responses by all age groups. More importantly, Figure 5.5 demonstrates that contributions to restoration events may change as we age as efforts become more targeted towards actions that are easily applicable by each age

group. Figure 5.5 suggest levels of environmental care differ between the age groups of participants. Upon further analysis of the participants age in respect to practices of tree planting and species protection, species protection increases across all age groups (*Figure 5.5*). However, for tree planting, the age groups of 26-34, 45-54 and 65-74 show higher responses. Although higher responses in the 65-74 category could be due to a low sample size, the remaining responses indicate increased levels of care for nature.

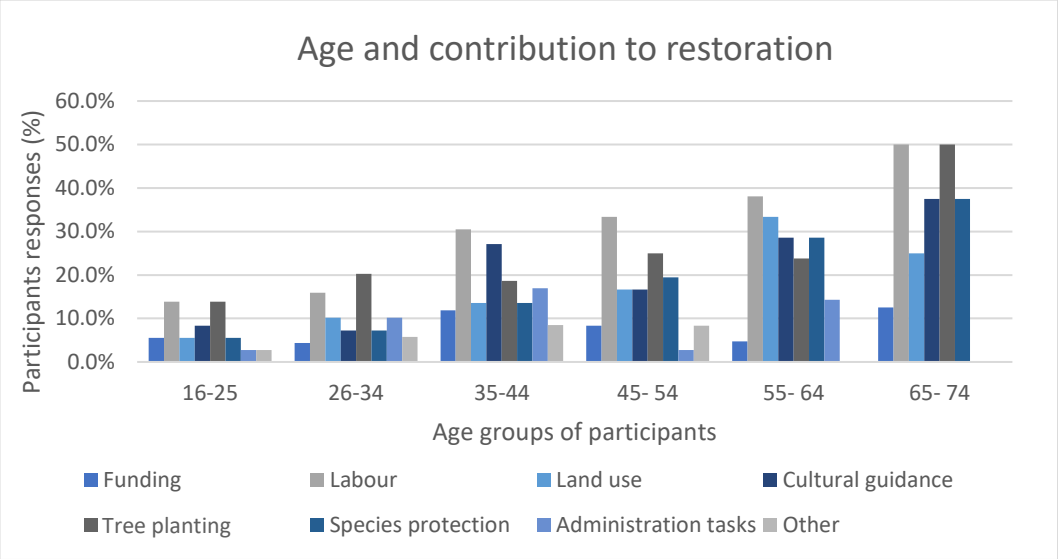


Figure 5.5 - Age and contribution to restoration

The role of age in how participants contribute to restoration events highlights particular actions that age groups find appropriate in contributing to such events. There was a significant relationship between the participants age and the likelihood of contributing by way of cultural guidance (X^2 (5, N = 229) = 15.2, p <0.001) and labour (X^2 (5, N = 229) = 12.1, p 0.0328) to restoration events.

5.3.3 Restoration Events

Acronyms	
DNA	Do not attend
AS	Attend sometimes
AR	Attend regularly

Table 5.3 - Acronyms for attendance

The acronyms in this table can be used to help interpret data from Figure 5.6.

When asked about the restoration events that participants attended seven options were provided for participants to choose such as marae, river, tribal, local council, department of conservation (DOC), whānau and church restoration events. Participants also selected how often they attended these events with answers ranging from do not attend (DNA), attend regularly (AR) and attend sometimes (AS) (see *Table 5.3* for acronyms).

Figure 5.6 - Participation in restoration events

Attendance of restoration events varied amongst participants. Do not attend had the highest response rates across all categories. However, marae and whānau categories had the highest numbers in the attend regularly responses.

Marae restoration events highlight some attendance with more participants noting they did not attend such events often (DNA, 42.7%; AR, 16.35%; AS, 40.88% see *Figure*

5.6). For river restoration events participants data presented the highest response in DNA (52.29%) and a low response rate in AR (9.8%) (*Figure 5.6*). Tribal restoration events also saw a large percentage of participants who did not attend these events (DNA, 51.33%) while those who did attend these events fluctuated (AR, 13.33%; AS, 35.33%. see *Figure 5.6*). Local council restoration events had a low response of 4.67% in AR and higher responses in DNA (56%) (*Figure 5.6*). DOC restoration events also shared similar trends with a large percentage of participants that did not attend DOC events (DNA, 63.5%) and participants who attended sometimes (AS, 29.73%. see *Figure 5.6*). Whānau restoration events saw an increase in responses with over half of participants who attended these events every so often (AR, 26.92%; AS, 42.95%. see *Figure 5.6*). In addition, church restoration events had a very high response rate where participants indicated they did not attend such events (DNA, 77.55%. see *Figure 5.6*). The response by the participants indicates low responses were gathered in the AR category but whānau, tribal and marae events had the highest responses in this category. There were also a large number of participants that did not attend the events listed except whānau restoration events.

When further analysed, the data from participants show that age may also influence what types of restoration events participants attend. Figure 5.7 reports responses for regular attendance of river, local council and doc restoration events. Here, the data highlights low responses across most age categories. This could highlight a need to increase attendance of such restoration projects by deliberately targetting younger age groups like those between the ages of 16-34. Both local council ($X^2(5, N = 104) = 12.8, p < 0.001$) and DOC ($X^2(5, N = 91) = 31.1, p\ 0.0252$) restoration event

attendance were more likely to be influenced by age.

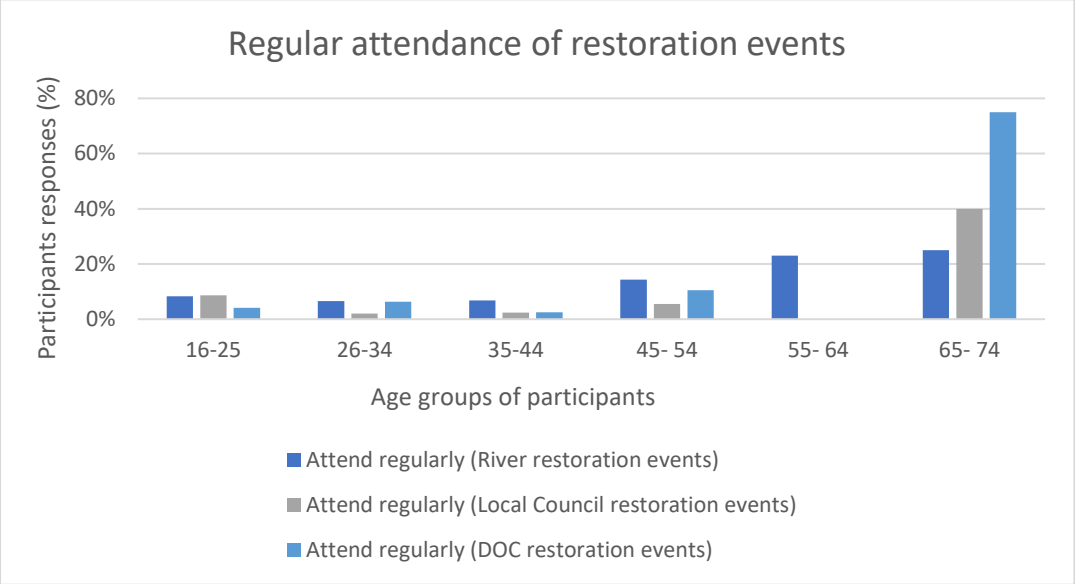


Figure 5.7 - Regular attendance of restoration events

There is a significant relationship between age and regular attendance of river, local council and doc restoration events. Evident in this chart is the low responses across all age groups apart from the 65-74 age bracket which suggest that older aged participants were more likely to attend river, local council and doc restoration events.

5.4 Focus Group Results

The survey data has exhibited the different practices undertaken by participants, the resources they collect and their contribution and attendance of restoration events. The focus groups provide an opportunity to explore these areas in more detail, by understanding practices and resource collection in Kirikiriroa.

5.4.1 Practices of Kaitiakitanga

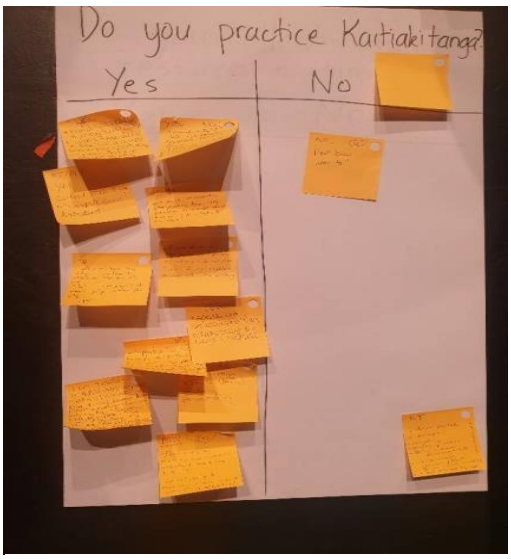


Figure 5.8 - Image of focus group 1 participants responses

The image shows answers given by participants to the question "Do you practice kaitiakitanga?".

The participants were asked if they practiced kaitiakitanga in their place of residence (*Figure 5.8*). In Chapter 4 this question was used to show the presence of nature and place in participants responses. Here, the aspect of practice is drawn out from the participants responses to this question. Participants of Focus group 1 noted recycling and gardening as general practices that participants felt allowed them to undertake their practice of kaitiakitanga. There was also the recognition of spirituality as one participant mentioned practicing a spiritual component of kaitiakitanga which was to raise vibrational connections to spiritual beings. There were also comments by participants about Māori cultural aspects that enabled them to undertake kaitiakitanga such as sharing whakapapa to the urban space. For those who did not practice kaitiakitanga, a lack of knowledge was attributed to their limited kaitiakitanga practice. Participants of Focus group 2 stated that they did practice some form of kaitiakitanga in Kirikiriroa. This mostly entailed

gardening which allowed the participants to be out of the house and amongst some form of nature. More importantly, participants undertook tasks that ultimately enabled them to practice their form of kaitiakitanga such as sharing knowledge, being involved in family and community events at the Rauawaawa Kaumātua Trust. Table 5.4 details the discussions shared by the participants of both focus groups about their kaitiakitanga practices. Key words have been extracted from these quotes to further highlight the presence of practices inherent in their discussions. Evident in this table is the mixture of both environmental and cultural practices undertaken by participants.

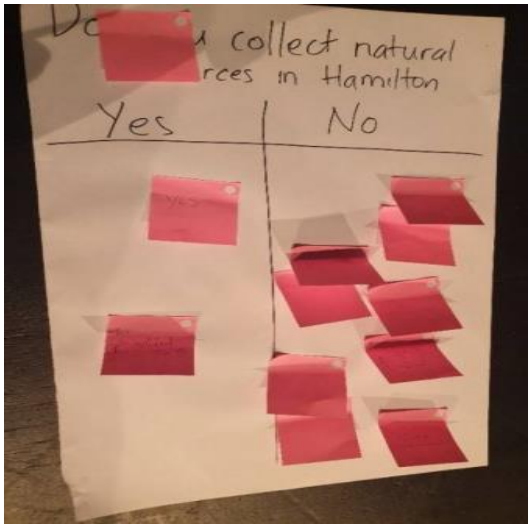
Focus group	**Practice undertaken**	**Quotes from focus group participants**
1	Picking up rubbish, raising vibrations, connecting with kaitiaki	*"Yes, physically by picking up rubbish anywhere me and my kids go. Spiritually by raising vibrations and connection with kaitiaki."*
	Recycling, rubbish collection, community events	*"I don't practice it except recycling, picking up rubbish, being involved in community events, I would like to volunteer/plant, be more sustainable but feel restricted by city life."*
	Cultural monitoring	*"Yes cultural monitoring with Ngāti Korokī Kahukura."*
	Environmental practices, community engagement	*"Yes, give advice, occasionally go to planting days, trap predators, encourage others through public talks and my work."*
	Gardening practices, caring for people	*"I care for the soil in my garden, so it provides me with nutrition. I care for my neighbours to help them with their wellbeing."*
	Spiritual connections, caring for gardens	*"Yes, build soil through my food garden, spend time daily in the wild areas, connecting spiritually, speak out for clean water, speak out and run workshops on relationships with land and nature."*

	Conservation	*"I practice kaitiakitanga through conservation efforts and also my work on climate action and sharing/ applying indigenous values to the work that I do."*
2	Gardening, small actions	*"I think we all do our little bits ay, help out in one way yeah we got gardens at the back that's for all of us."*
	Passing on knowledge	*"he teaches things, about what we are suppose to be doing, looking after nature and things that are important to us as kids. Because he passed on his knowledge onto us and that's what I try to teach my kids."*
	Gardening, independence	*"this year I did the garden myself because last year he grew them too close, I said that's why they're now growing look their too close. But I went and planted, my cauli and my broccoli."*
	Recognition of knowledge from elders, nature engagement	*"Yup, I'll go back to my tūpuna. When my grandfather was still alive and my grandmother they were the kaitiaki of the bush. Back in the day, when our tūpuna came across from Hawaiki. When they came into Aute they came in with some taro, and the taro was like that, like a horse root and they grow in the bush, they grow and you pick them, you take the end and get the root and plant it back in. Yeah and all the wild fruits and all that, that's what the tūpuna grew in the bush, and the grapes they were like that, big ones. And another one was the Tawharau, its long, its like a cabbage tree but the thing up the top it grows at a certain year, and the old people they use to look after that, a couple still look after them today. Our whānau still go up the bush to get some taro and then they replant them again. So that's what you call a kaitiaki ay."*

Table 5.4 - Ideas of practice

Aspects of practice inherent in the participants discussion about kaitiakitanga highlight varied ways that kaitiakitanga was undertaken by participants. These practices are listed as gardening, sharing knowledge, cultural monitoring and sustainable practices like recycling.

5.4.2 Resource Collection



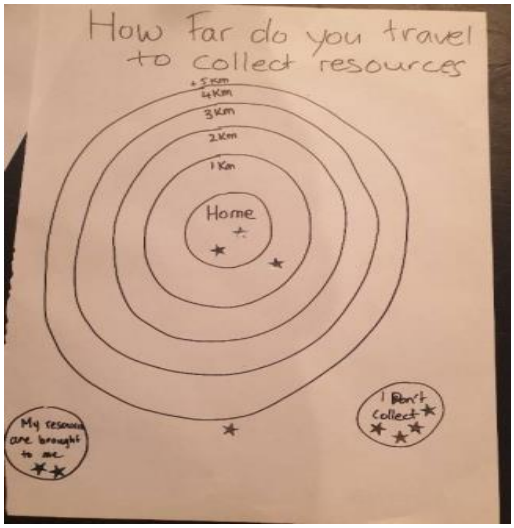


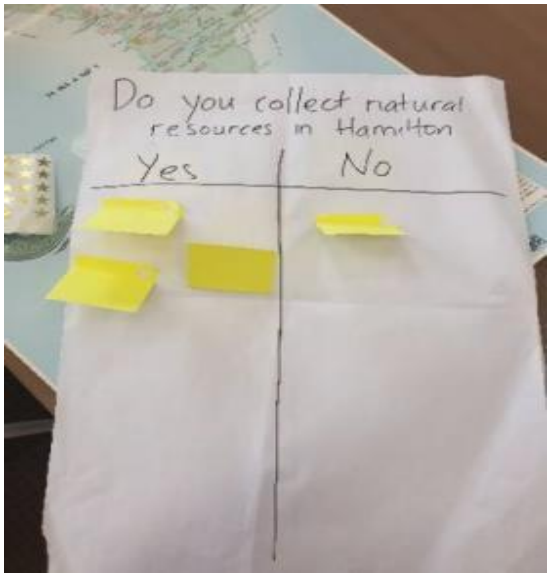
Figure 5.9 - Image related to resource collection by focus group 1

This image shows the responses from participants from focus group 1 to the question 'do you collect natural resources in Kirikiriroa'. Reponses show that most participants of focus group 1 believed they did not collect natural resources.

Figure 5.10 - Image related to distanced travelled by focus group 1

When asked how far those participants of focus group 1 travel to collect their natural resources, near their homes and having resources brought to them were listed by participants as key avenues for resource collection.

When asked about the natural resources that participants collect, there were different levels of resource collection in Kirikiriroa. Figure 5.9 and 5.10 illustrate how many participants from Focus group 1 collected natural resources and the distance they travel. Eight out of the ten participants stated that they did not collect nature resources, and some participants added further explanations on other post-it notes to clarify that they had resources brought to them. Distance travelled to collect these resources varied with answers showing participants gathered resources from their homes, from places that were 1km from their homes and 5km from their homes.



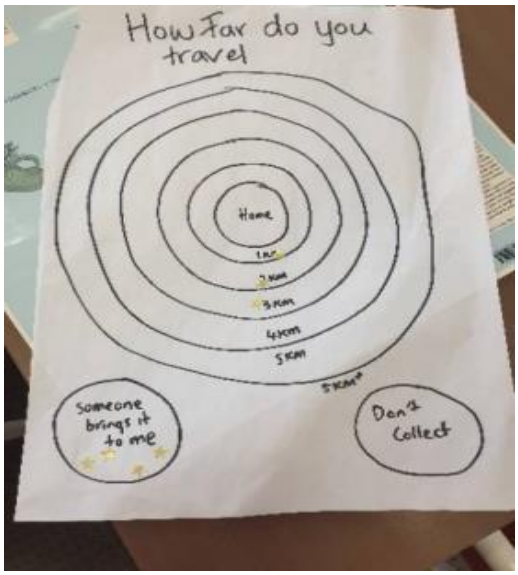


Figure 5.11 - Image related to resource collection by focus group 2

Participants of focus group 2 shared that most of the participants collected resources when asked 'do you collect natural resources in Kirikiriroa'.

Figure 5.12 - Image related to distanced travelled by focus group 2

Focus group 2 participants did not travel far from their homes to collect their natural resources. Resources were also brought to the participants by close family members.

Participants of Focus group 2 were also asked about the natural resources that they collect in Kirikiriroa. Figure 5.11 indicates that three out of the four Focus group 2 participants collected natural resources. Almost all said that they collected natural resources mainly from their own gardens or the gardens located at the Rauawaawa centre. One participant noted that they did not collect any resources as the particular species that they needed required others within their immediate family to transport their resources into Kirikiriroa from another region in Aotearoa.

When probed further about the distance travelled to collect these resources, all participants highlighted that their resources were brought to them and were collected from places near them. The data establishes some challenges with acquiring resources, but that participants were reliant on relationships with their homelands and wider whānau networks to access the resources they required. The

participants did share that because of their limited accessibility to their required resources, they were also reliant on supermarkets for food sources.

"I'll put from my home to Countdown to get some mussels. Yeah and some is brought to use like yesterday, my kids came around and brought some mussels for us. He brings them quite a lot during the summer, he usually brings it in a big bag and I just share it out." Focus group 2 participant, 2019

5.5 Interview Results

The observations from the survey and focus groups portray the different ways we might access resources, the relationships we rely on to do so and the practices we use in urban spaces. To further explore these ideas, participants of the interviews share the practices that they associate to kaitiakitanga in the urban space. Here, interview participants discuss ideas of mana, seasonality, collective and individual kaitiakitanga practices, engagement with restoration groups and aspects that encourage kaitiakitanga.

5.5.1 Kaitiakitanga and Mana in Urban Spaces

Participants were asked to discuss their practices of kaitiakitanga and where they undertook this practice in urban Kirikiriroa. Table 5.5 displays the discussion shared by participants about their kaitiakitanga practices, the aspects of mana and practice inherent in these discussions and highlights their identity as Mana Whenua or Mātāwaka. Practices of kaitiakitanga by Mātāwaka descendants ranged from planting gardens to contributing to the well-being of people through community events and involvement in local Māori events. Mātāwaka participants ties to their own homelands meant that they did not undertake in-depth forms of kaitiakitanga practices in Kirikiriroa. Their commitment to their homelands meant the participants

could only focus their energies and efforts in helping to care for their childhood homelands. This is evident in the participants discussion about general forms of kaitiakitanga practices and the recognition of local hapū (*Table 5.5*).

Aspect of Mana	**Aspect of practice**	**Quotes by interview participants**	**Mana Whenua or Mātāwaka**
Limited rights to practice. Limited hunting and fishing	Generic form of practice. More resource harvesting in childhood places	*"I do practice a generic form of kaitiakitanga. But I have to say that I find it difficult to practice kaitiakitanga here, because it's not my land. It's not my whenua. And I really don't have a right to practice kaitiakitanga. So here, I don't hunt. I don't fish. I don't eel here because it's not my land. And I don't have those rights. So that's how I see back in my own whenua. I have all the rights."*	Mātāwaka
Interest in protecting childhood lands	Generic form of kaitiakitanga practice - recycling, reusable materials.	*"I mean recycling, reusable water bottles, coffee cups, all of that kind of stuff [my partner's] whānau has a Land Trust so we were going back to those wānanga and I'm also on the land block committee for some of our whenua back on the coast."*	Mātāwaka
Recognition of whakapapa	Consideration of local hapū	*"I think one of the interesting things is when you live outside of your rohe, live in an area that you don't whakapapa to, don't strongly whakapapa to or consider home there's other considerations that you need."*	Mātāwaka

Mana held within nature	Karakia in river	*"One of the things that I do sometimes as well [is] go to the river early in the morning for karakia. And even though the water at the river is not of the quality in terms of its pollution that [it] used to be, it still had some mauri and mana and a certain amount of tapu."*	Mātāwaka
Protection of whenua	Policy for kaitiakitanga	*"the whenua committee that I'm on for the tribe, we are writing policy around how to look after land and kaitiakitanga is the main heading which influences how the rest of the policy and operating procedures happen."*	Mana Whenua
Recognition of marae and hapū	Engagement with marae, local Māori institutions	*"being active [in kaitiakitanga] in the kōhanga reo and my kids have gone to kura kaupapa so with people. My wife's marae, my wife is from Hauraki, Maniapoto its not far from her marae and we go back there and stuff like that."*	Mātāwaka
Recognition of local hapū, wairua, whenua	Engaging with local hapū, blessing home	*"one of the whakaaro that we had was ok yeah, we're buying a house, but it also comes with the whenua [and] I guess, interim custodians of this whenua that we felt that was appropriate. The Mana Whenua blessed this house for us. So that there was, I guess kaitiakitanga on a relational basis but also on a looking after our wairua because we will be obviously spending so much time on this piece of whenua."*	Mātāwaka

Recognition of natures mana, caring for nature	Conscious decision making, environmental practices	*"In my own way I do. I'd like to think that I do. I think kaitiakitanga, there's this idea that to be a kaitiaki you actually need to be in, you know, growing vegetables or, and I think yes, that is one way. But another way is just to be conscious and aware of what you do. Small practices, like trying to be zero waste in my own way, and so I don't, and I've only just really been on this this year, stopped eating meat and animal products, you know, just because of the impact that has on the environment and stuff like that."*	Mātāwaka

Table 5.5 - Aspects of mana and practice

The discussion by participants about their practices of kaitiakitanga highlight the aspects of mana. The importance of mana was shared by both Mātāwaka and Mana Whenua and shows that practices for kaitiakitanga can enable the protection and acknowledgement of mana.

Interview participants also spoke about the spiritual connection that they actively sought to maintain with nature, including Mātāwaka who reside in Kirikiriroa (*Table 5.5*). The Waikato River is a large body of water that runs through the Kirikiriroa city. This body of water according to the participants has helped them connect to nature through karakia and other cultural practices like blessings and spiritual cleansing. This has allowed the participants to become aware of other spiritual areas in Kirikiriroa.

Participants also noted that the places they practiced kaitiakitanga varied, however the majority stated that their homes were the main location for their practice. Some participants noted that they often practiced kaitiakitanga in their workplaces as these spaces provided an opportunity to work with local communities with regard to environmental protection and engagement with people. For some participants,

applying kaitiakitanga practices in their workplace enabled them to learn more about the local hapū and areas of significance. Participants were provided an opportunity to include kaitiakitanga in the policy documents of their workplaces to better facilitate engagement with local hapū and government organisations around resource management and the protection of nature. The adaptation of participants practices of kaitiakitanga in urban spaces ranged from, holding wānanga in their own houses rather than marae, having their homes blessed by local hapū kaumātua, using different resources to warm the soils to grow plants and having whānau bring familiar foods from their childhood homelands to the urban space (*Table 5.5*). In addition, ideas of modernising kaitiakitanga practices were also shared in the participants discussion as the urban space required the participants to actively seek out ways to ensure their childhood knowledges were not lost in the urban space. Interview participants shared they would often undertake practices in the natural world such as collecting rongoā, wood and foods. These practices were reliant on the care and protection of nature relationships so that these resources could foster and become a sustainable part of participants cultural practices. The synergies that exist between kaitiakitanga and other cultural practices highlights the importance of kaitiakitanga practices in maintaining relationships with nature and culture. This provides another lens in which to understand kaitiakitanga as it shifts the focus on relationships we create to nature through practices rather than focussing solely on the practices in isolation from such relationships. In addition, almost all participants shared that they undertook other cultural practices in the urban space. This ranged from common practices such as karakia, waiata and whaikōrero. It also included practices that were not usually discussed widely such as tohi (blessing) in the Waikato river.

"karakia, waiata cultural things I feel like they are just a part of normal everyday life, [like] whaikōrero, my kids do kapa haka"- Interview participant, 2019

"yup like karakia, fasting, still do and go to the moana as well and the practices through those things. Warnings and signs, grew up with certain things like birds or whatever [they] might do and those things, its still a thing I'd look for and recognise." - Interview participant, 2019

5.5.2 Time, Day and Season for Kaitiakitanga Practices

All participants noted that there was no specific time or day to practice kaitiakitanga. It was shared by participants that kaitiakitanga should be undertaken everyday as it is a commitment to the care and protection of relationships and resources. However, participants did state that seasonal changes also meant that kaitiakitanga would adapt according to the resource, place and environment. This highlighted that often kaitiakitanga in accordance to the local maramataka of seaside tribes, would differ to maramataka of inland tribes. Seasonal variations also meant that some resources would only be available for a set period and thus, the kaitiakitanga practice would increase to ensure the proper protection of that resource. Table 5.6 shows discussions by participants about the aspect of time in undertaking kaitiakitanga, key words inherent within the participants discussion about ideas of time and if the participant was Mana Whenua or Mātāwaka. The recognition to continuously practice kaitiakitanga indicates that participants may intertwine this concept into their everyday practices. More importantly, they have highlighted the potential to adapt kaitiakitanga practices to suit their needs and the needs of nature in urban spaces. This does not harm the validity of their practices but presents the responsive ways that kaitiakitanga can be used to mediate relationships with nature through adaptable practices.

Time aspect	Quotes from interview participants	Mana Whenua or Mātāwaka
Continuous practices, cyclical, functions of nature	*"apart from doing it all the time, I do believe there is, because in the natural world everything, that's how the natural world functions you think about the whitebait, everything has their cycle, even the tuna, the tuna have their cycle and of course the moons, when is a good day to plant."*	Mana Whenua
Daily practice, traditional practices of time	*"nah I think every day, every year, every month you need to practice. We should really go back to our traditional times, they did wānanga, its a time to do wānanga about some of these things like kaitiakitanga, but no its should be practiced every time."*	Mātāwaka
Seasonal practices	*"nope, all day every day? Yeah. There is no time or there are certain times of the year when we would celebrate our spiritual links to the land such as Matariki such as the changing of the seasons, we would celebrate that, but no, I don't think there's any particular time."*	Mātāwaka
Continuous practices, influence by seasonal changes	*"I thought nah, it's all the time. But I did think about mum's idea and yeah, I agree with that. Because I was thinking of a ngahere and there's no particular time to go into the ngahere when you think about it, but then mum was saying well no you would go in the morning because its respectful to the ngahere and the manu, everything's awake, everything's alive and you wouldn't go into the afternoon because it's an afterthought and it sort of got me thinking about that time thing."*	Mana Whenua

Matariki, seasons planting, timing of practice	*"well, planting those different events that happens around Matariki. Bringing in the new year. That's always been practiced. But it's not just for Matariki as well, we all know that it's been a common thing now when you plant on the whenua with your baby's placenta, and it's not just Māori who do that anymore."*	Mātāwaka
Nature cycles, influence on cultural practices	*"So we have that [Pikopiko] on our tables as well and we called it the Māori asparagus there is a time and season when you can only get that, [it] was not accepted to take that every year and for hunting pigs that's obviously it's okay to go all year round because it's not a native species of New Zealand and there's always going to be an area where there's going to be pigs. And so there's different whakaaro for different things. There's also certain berries like the Karaka berries that come out and then we take those berries as well and we cook them. Yeah. And so for fruits as it's very straightforward because it's seasonal. But for hunting tuna, it's actually up to the hapū. So in Ngāti Haua if we say theres a rāhui on the tuna, if its getting a bit scarce....we wouldn't put any eels on the table unless it's a big kaupapa."*	Mana Whenua

Table 5.6 - Aspect of time

The discussions by the participants about the aspect of time in relation to kaitiakitanga practices shows how seasonal aspects as well as the frequency of practice may influence how kaitiakitanga is undertaken. These perspectives were shared by both Mana Whenua and Mātāwaka participants.

Understanding that there may be seasonal and environmental knowledge to undertake kaitiakitanga also highlights a need to understand how the urban space could encourage its own set of knowledges about seasonal changes, environmental

signs and maramataka knowledge. This also supports the rationale for undertaking general practices related to nature in urban spaces as the development of such knowledges is still ongoing, particularly for Mātāwaka participants.

5.5.3 Practices with Collective Group or Individually

When asked if the participants applied kaitiakitanga collectively or on their own, these responses varied. Some participants noted that they actively practiced their understanding of kaitiakitanga on their own as their practice was specific to their worldview, values and hapū knowledge. Some participants also noted that they practiced kaitiakitanga as a collective by including their children and wider whānau in their efforts such as living a parakore lifestyle (waste free), creating gardens and harvesting foods. The participants noted that they include their whānau in how they share their knowledge and in how they care and protect the Māori language. These aspects allowed the participants to begin the process of knowledge transfer within their whānau albeit within the urban space. Table 5.7 highlights these discussions about individual and collective practices along with information about the Mana Whenua or Mātāwaka identity of participants.

Individual or collection	**Quote by interview participants**	**Mana Whenua or Matawaka**
Both individual and collective	*"I suppose both, it'll be me and then sometimes it will be our whānau committee or the whānau in our house."*	Mana Whenua
Individual	*"I will start with myself before I go out with the collective. Sometimes the collective doesn't agree with the stuff you do, they're on their own waka. I always try to get myself right."*	Mana Whenua
Both individual and collective	*"yeah, we're all out there usually, but then the maintenance is usually just me, but then when I come to harvesting, then it's all of us."*	Mātāwaka

Individual, for the collective	*"I just look after myself and people in my circle, but I'll give you an example. After my father passed away and so to help me deal with that loss every 2 weeks I mowed the urupā and there was a big part where nobody had ever mowed and I went in there and I mowed it all down, because I wanted to make it nice, the whole urupā. To this day everybody keeps it down it was just a part that nobody touched, it was overgrown it had an old fence in there and I just pulled everything out and so I did that for two and a half years and it was on a hill. And even though I did that by myself and I use to take her down to help me I was actually doing that for the collective, for the hapū, for the papakāinga down the road for whoever. So even though I was doing it on my own I was doing it for everybody."*	Mana Whenua

Table 5.7 - Collective and individual practices

Participants shared discussions about the individual or collective nature of kaitiakitanga practices that they undertook. Most participants practiced and shared kaitiakitanga knowledge with close members of their family.

In addition, participants were also aware that often their understandings of kaitiakitanga might differ to the views of their hapū (*Table 5.7*). This meant that participants would share their practice with whānau members to lessen judgement or persecution by other hapū members. The individual practices of kaitiakitanga by participants demonstrates that collective efforts allow the longevity of such practices. Participants have ensured to share this knowledge to not only lessen the burden on themselves but to also allow whānau members to learn and create relationships with nature. This sharing of knowledge recognises the intergenerational commitments that are inherent in kaitiakitanga knowledge but also support newer practices to potentially develop by younger members of the participants families.

5.5.4 Aspects that Encourage Kaitiakitanga Practices

Responses for this question about the aspects that encourage kaitiakitanga varied amongst participants however there was a common theme of nature that was prevalent in the ideas shared by the participants. The participants stated that access and engagement with nature were key factors that encouraged them to practice kaitiakitanga. Participants noted the importance of understanding Te Ao Māori in order to practice kaitiakitanga, without this knowledge, the practice would not include cultural concepts to guide appropriate behaviour. Among other aspects, participants shared that their early exposure to nature during their childhood actively encouraged them to practice kaitiakitanga in the long term. This coincides with the previous comments made by participants about their changing practices of kaitiakitanga in the urban space. Being amongst the natural world also encouraged the increase of spiritual well-being for participants. Reference was often made to the healing properties that the natural world held for participants in supporting their well-being.

"for me it's the natural world, because for me its healing being in the natural world , in the bush, I suppose it's something to do with the mauri from the ngahere, from the awa, it's just rejuvenating when you look after your farm, when you look after your people. That's where your kai is, in the natural world." - Interview participant, 2019

These aspects assert that both physical and spiritual knowledges can support participants to undertake kaitiakitanga practices. More importantly, there is a desire by participants to be immersed and connected to nature irrespective of their location. This highlights the important role of urban nature in supporting kaitiakitanga practices in Kirikiriroa.

5.5.5 Engagement with Conservation and Restoration Groups

There were limited participants who connected with restoration groups in both Kirikiriroa and their childhoods places. This limited engagement with conservation and restoration projects were attributed to many factors such as the lack of knowledge about these projects, limited access to the projects and the limited time that participants had in order to contribute to such projects. However, there were a number of participants who stated that they were interested in being part or knowing more about conservation and restoration projects in Kirikiriroa. Table 5.8 shares insights about restoration engagement along with the level of engagement and the Mana Whenua or Mātāwaka identity of participants

Level of engagement	**Quotes by interview participants**	**Mana Whenua or Mātāwaka**
No engagement	*"it's something that I want to do on the block, we've made some good networks over the year."*	Mana Whenua
No engagement in urban space	*"Nope, not in Kirikiriroa. My own place I do... I was involved in a planting project that they had alongside the river but that was towards Rangiriri, when they were planting flax and that around the marae down in Horahora, in Maurea, other than that I haven't been."*	Mātāwaka
Some engagement	*"so not me personally but my team does, so they provide advice to the restoration groups around the way that they engage with people and are informed by some of the work that I've done."*	Mātāwaka
Has engaged with restoration projects	*"they helped me develop my practice. Because their talking about conservation, and my practice is about utilization. So, you know, in some cases there's a bit of ground to be fought out there about, you know, my own notions of kaitiakitanga and what public government policies is on kaitiakitanga too and some cases, you know, they might not sit well together and that sort of stuff. But I have to be*	Mana Whenua

	conscious of the fact that they are managing public lands. So they have policies in place, and those procedures in place, and then I had to be conscious that I'm not harvesting from those particular areas as well."	
Whānau restoration	*"some of the other mahi we do is with whānau, so we do a lot of family stuff, that type of mahi that we do is around trying to restore whānau to a space that's safe and also to get them to understand their values. Its building capability within whānau, I guess is a different type of restoration."*	Mātāwaka
Hapū restoration	*"Yes, as I mentioned before the Mahi Trust....it's been widely accepted now that within waterways in Waikato you have to have a bit of a verge, a plantation verge five meters away from the water line and that's just to stop farmers, lets say pesticide, and whatever they do to keep the cows healthy, to not seep into the waterways. So the Mahi Trust, they go around and do that type of plantations around, not just Haua, they go around into different areas of Waikato as well. And certain families they've taken upon themselves to actually do that without, so they got their own nursery, their own homes, they've got maybe a few hundred plants, and they actually go out themselves and say, to farmers, is it okay if we can come around and fence off some fencing and do some plantings. And a lot of times the farmers are cool with it. We've never really got any conflict with any farmers. If you're willing to do the job then come on in. And so some of the families have taken upon themselves to do that."*	Mana Whenua

Table 5.8 - Engagement with restoration events

Engagement with restoration projects and the level of engagement varied amongst participants. Most participants engaged with hapū and whānau related restoration events. There were limited participants who engaged in restoration events held in other tribal areas but were still interested in and aware of these restoration projects.

When participants were quizzed further about the reasons they were limited in their engagement with these projects, some stated that often the values that were used in how the restoration or conservation projects were constructed, differed from the kaitiakitanga principles that participants were using in connecting to their environment (*Table 5.8*). This meant that participants were unclear as to where they would be useful in the projects but also how the projects could support them to connect with nature or apply cultural practices with nature. Mātāwaka participants noted that this limited engagement with restoration groups would only be applicable in urban spaces. The participants reported that they sometimes would contribute to conservation efforts in their own childhood homelands or if it had a direct benefit for their hapū and whānau and was initiated through cultural spaces such as marae (*Table 5.8*). Moreover, participants stated that often their contribution to urban restoration projects was through offering cultural guidance for restoration groups.

For those that did engage with restoration groups they found no issues at all with their engagement (*Table 5.8*). The capacity in which they engaged also differed from advisory roles to groundwork such as planting. Although the number of participants involved in these restoration and conservation projects were limited it shows that there are opportunities for Māori to contribute and to be part of these projects. What was also noted by the participants that did engage with restoration projects was the differing views in how lands and resources are managed and how these might conflict with Māori values and concepts such as kaitiakitanga. However, participants did acknowledge that the different nature engagement by restoration groups still helped the participants to achieve what they needed from the project and highlights the opportunity to develop ways to support outcomes for both Māori and restoration projects in urban spaces.

5.6 Discussion

The overall goal of this chapter was to demonstrate the value of kaitiakitanga to the protection of resources and the expression of practice in urban spaces. Two key aims were posed to achieve this, which were to:

1. Understand the relationship between resources and practices that are used by participants in urban spaces; and
2. Understand what influences engagement of participants in restoration projects.

Practices and resource use were shared across all three data sets by the participants. The key findings of this chapter illustrate that resources are being collected by participants from different areas in the urban space (see section 5.6.1). Participants are employing different cultural practices to connect with cultural knowledge and nature in urban areas (section 5.6.2). In addition, other key findings in this chapter report the importance of whānau support for resource collection, the need for accessibility to resources in urban areas, the different ways kaitiakitanga is practiced by Mana Whenua and Mātāwaka as well as the level of engagement with restoration projects. Moreover, the findings illuminate the role of migration on participants knowledge and practices of kaitiakitanga (see section 5.6.4)

5.6.1 Resource Use

The harvesting of resources are important tools used by Indigenous people throughout the world (Duhaylungsod, 2001; Glazier, 2018; Wehi & Wehi, 2010). The participants have shown that this sentiment is still valid within the urban space. The participants data confirms the use and collection of natural resources in urban areas and that these resources are harvested from local areas like participants

homes. The rights to collect such resources was also highlighted in responses from participants of the interviews which suggest an awareness and acknowledgement of the complexities in harvesting resources in other tribal territories. The role of local tribes in managing natural resources is important, as much of the historic and cultural knowledges related to such natural resources is embedded in narratives that are highly valued by local peoples (Wilson, Pearce, Jones, Fleischfresser, Davis, Jones & Lieske, 2018).

Both the survey and interviews purport that awareness and recognition of local hapū knowledge contributes to our frequency in natural resource collection. There were also high responses to restoring and maintaining water-based resources both from fresh water and sea water. The data establishes that efforts are applied in terms of maintenance and restoration, to resources that are frequently accessed or are of value to the participants.

The participants have demonstrated that resource collection is relatively easy for them, even in the urban space. The data has illustrated that kaitiakitanga practices are driven by our need for resources and contribute to the expression of cultural knowledges and the understandings of kaitiakitanga. These practices encompassed ideas of care, protection and advocating for the well-being of nature. There was also the recognition of spirituality in the care of nature but also as a mechanism to create strong relationships with nature. This was also seen in the recognition of whakapapa as a guiding aspect in how and why the participants undertook kaitiakitanga.

What is further apparent in the participants data is the importance of whakapapa in mediating how best to collect and engage with resources in the urban space. In addition, understanding the cultural needs of urban peoples could support better

opportunities to use nature in urban spaces to enhance practices and resource use. Moreover, recognising the important species of urban spaces will not only support migrant peoples but also local tribal knowledge and practice (Wilson et al., 2018).

5.6.1.1 Challenges for Resource Collection

There were challenges that surfaced in the participants data about the decreasing knowledge pool about sections of the natural world, the resources held within it as well as the exposure to other forms of natural resources that may not be present in urban areas. Although resource use is important for cultural practices, particular species may be restricted from harvesting activities and severely impact opportunities to express cultural practices and knowledge (Glazier, 2018; Lyver et al., 2008). These ideas are also seen in the data of participants about some of the decreasing knowledges they hold about nature. The data has indicated limitations in knowledge for water-based medicinal resources which may be influenced by the current location of participants or the small sample size of the survey. As with limitation in knowledge about particular parts of the natural environment, there were also limited references by the participants about traditionally hunted species like protected species of kererū which may be limited in urban spaces (see Baranyovits, 2017). Exposure to different life forms in urban areas is important for increased well-being, knowledge creation and retention as well as the development of positive experiences for urban dwellers (Poe et al., 2013). Urban spaces are known as sites where biodiversity has decreased as a consequence of human action (Doody, Sullivan, Meurk et al., 2010). This threat, which is already well known, highlights the further potential risk to cultural practices and knowledges that may migrate with urban peoples. The limited use of native species for foods may also indicate limited availability of these resources in urban areas. This poses a risk to

traditional knowledges related to such species and the practices we use to create and maintain cultural knowledges. This further highlights the challenges of accessibility of traditional resources, resulting in increased use and reliance on western resources. This reliance can alter traditional knowledges related to harvesting as participants associate particular food sources to modern areas like food stores rather than traditional harvesting locations where resources were once collected.

5.6.2 Practices

Cultural practices have been used by Indigenous peoples as a way to express traditional ecological knowledge (Huambachano, 2019). There were different cultural practices that participants undertook that further supported their practices of kaitiakitanga like karanga, whaikōrero, tohi, the collection of rongoā and karakia. These practices allowed participants to navigate appropriate ways to engage with nature, even within new tribal boundaries. Although usual practices within nature may be seen as harvesting practices of natural resources (Zentner, Kecinski, Letourneau & Davidson, 2019), the cultural practices shared by participants of this study have shown other forms of practice that support kaitiakitanga like karanga, tohi and karakia. Such practices supported the participants to undertake the ethic of kaitiakitanga in urban areas by allowing intrinsic practices like karakia to be used as a tool to establish a relationships with nature. Although the level of practice varied amongst participants which could be attributed to knowledge of te reo Māori and tikanga Māori, there was still a willingness and awareness by participants to engage in some form with nature through cultural practices. Seasonal and environmental aspects also contributed to how participants undertook kaitiakitanga but also, where they would apply this practice.

The data from participants also highlighted emerging risk to kaitiakitanga practices associated to accessibility, resource use as well as aging that affected the ability of participants to undertake kaitiakitanga in urban Kirikiriroa. Moreover, the participants data has expressed general awareness of different practices that support kaitiakitanga. This highlights a further risk where urban dwellers may not be comfortable or knowledgeable to physically undertake cultural practices in urban areas. Stanley et al. (2015) have scoped new challenges to biodiversity in urban spaces, the participants of this study further show that challenges for cultural practices will also develop as we move in and through new territories. The participants data presents how different kaitiakitanga practices may be an outcome of our age, level of knowledge about resources and the places we engage with to source such resources. The role of local hapū in protecting and caring for urban spaces influenced how and where participants would practice kaitiakitanga. This has ensured that the participants were seeking the narratives of local hapū to support their understanding of kaitiakitanga in new tribal areas. Participants noted that although the urban space was not their childhood home, they were still interested in contributing to the well-being of this space. It was the thoughts and memories of their homes that actively encouraged the participants to care and continue their practices of kaitiakitanga. To understand this perspective, Jackson (2013) shares the need to explore the teachings left to us by our ancestors. This sentiment is further captured by Kawharu (2010) about the need to use our past as a guide in future. These perspectives show the process of prior thought that Māori use in navigating new spaces which is expressed by participants.

This subsequently gave the participants an opportunity to engage with two forms of kaitiakitanga. These forms of kaitiakitanga can be noted as the practices associated

to the participants homelands and practices reshaped to suit the participants new surroundings. This often meant that participants were practicing generic forms of kaitiakitanga practices in urban places like Kirikiriroa. Generic practices meant that participants would not fully commit to kaitiakitanga practices in Kirikiriroa like they do in their childhood homelands. Generic forms of kaitiakitanga can be noted as practices like recycling and gardening. Such practices do not specifically engage with the management of resources and place within the urban spaces but still provide a form of nature connection to flourish. These generic forms of kaitiakitanga are adapted to recognise prior knowledges of Mātāwaka participants but allow an expression of kaitiakitanga that further acknowledges ancestral responsibilities of local tribes. This idea was heavily associated to ideas of mana and knowing that as Mātāwaka, there were limited rights that they believed they held in relation to resource use in another tribal groups area.

5.6.3 Restoration Engagement

The participants have reported some engagement with restoration projects in their respective areas. For the majority of participants, attendance of restoration events was low, however for those that did attend these events, whānau, marae, tribal events and restoration events in their childhood areas were more frequented by the participants. Although restoration projects use environmental, economic and social objectives to drive restoration activities (Peters et al., 2015), the participants have emphasised the cultural objectives inherent in their rationale of engagement with selected restoration projects and practices with nature. In addition, the ways that participants engaged or supported the restoration and maintenance of resources also supports the types of restoration they might find valuable. These aspects assert where efforts can be focussed to increase the likeliness of engagement by Māori in

urban spaces with restorative initiatives beyond whānau, marae and tribal efforts. Using kaitiakitanga and Māori knowledge more generally, the objectives of restoration groups, whānau and hapū could be meet, even in urban areas (Hall et al., 2021; Walker et al., 2019).

5.6.4 Migration, Knowledge and Practice

There is growing relationship between migration and the level of practice and knowledge that participants held about certain resources and practices of kaitiakitanga. Māori oral traditions have been used to transmit ecological knowledge from one generation to another through waiata, karakia and whakataukī (Whaanga, Wehi, Cox, Roa & Kusabs, 2018).

There were discussions shared by the participants about resources enabling certain practices such as the making of rongoā or food collection. These practices relied on certain species to be available in the urban space, if they were not, participants would then seek assistance from their whānau in other rural communities to transport resources to them. In addition, traditional knowledges from outside of the urban space also migrated into urban spaces with participants. Historically, this was purposefully undertaken to ensure cultural identity and connection could be maintained in urban areas by migrant Māori (Williams, 2015). Although traditional knowledge was mainly discussed by the older participants, the use of this knowledge helped to ensure that the individuals could navigate their new spaces and acquire the resources needed for their well-being. Older participants stated that this was an important process of kaitiakitanga that they actively practiced. To do this, participants would either teach their children or grandchildren their traditional practices, share stories, take them to important places and show them the important resources that they required from nature to undertake kaitiakitanga practices. This

migration of knowledge into the urban space can benefit urban dwellers. However, considerations must also be made about the impact knowledge migration may pose to rural communities as their knowledge pools become depleted (King et al., 2018; Rangiheuea, 2011; Williams, 2015).

Overall, we have seen through the data sets, that kaitiakitanga relies on not only our opportunities to engage with nature, but also the support of cultural knowledges, people, place and practice, especially within the urban space. Although engagement with restoration groups may currently be limited amongst participants, there is ample opportunity to use kaitiakitanga as means for engagement and to support cultural and environmental development of whānau, hapū and restoration groups.

In addition there was also a prominent theme about the risk to kaitiakitanga practices that may be influenced by accessibility, mobility, aging, changing practices and the sharing of cultural knowledge. The influence of age shows that there is potential risk to knowledge transmission and knowledge development. Practices with nature highlight the need to ensure all age groups have the ability to create and maintain relationships with nature. But also that urban peoples have the tools to engage with nature in a way that develops understandings and appreciation of the natural world. Moreover, the data has shown a need to address the migration of knowledges from homelands into urban spaces and what this may mean for rural and urban communities alike.

5.7 Conclusion

This chapter has presented the numerous ways that participants undertake practices and collection of resources in the urban space. Evident in this chapter is the need to explore how demographic information, hapū relationships and cultural knowledge may also create new ways for kaitiakitanga to exist in urban spaces. For this reason,

the next chapter draws on data about people and culture in relation to kaitiakitanga in urban areas to understand other influencing factors in the application of kaitiakitanga in Kirikiriroa.

Chapter 6 - Connecting to People and Culture

"Thus, the practice of indigenous knowledge is, above all, the story of how social/cultural systems adapt to specific ecosystems." (Berkes, 2012, p.77)

The transition away from homelands and places of significance challenges relationships to place, knowledge, culture and people. Like many Indigenous peoples, my own transition to the urban space of Kirikiriroa entailed the same fate. Although I was fortunate to have experienced connections to people and place in Whangārei amongst my whānau and hapū, these experiences and the lessons along with them were still confronted through my transition to Kirikiriroa. Establishing new connections to the lands of Kirikiriroa brings its own set of challenges to my understandings of kaitiakitanga in both its physical and cultural context. More importantly, it allowed me to recognise the components of this practice that are often overlooked comparative to environmental engagement. The role of people and culture in kaitiakitanga is rarely discussed in how we undertake kaitiakitanga, however through my transition to Kirikiriroa, this aspect has become more prominent in how I have endeavoured to make sense of kaitiakitanga in a new urban place. It has challenged me to adapt my own understandings, and like the quote shared by Berkes (2012), adapt my own traditional ecological knowledge to suit a specific eco-system. This has not only tested the value of my own understandings of nature but has also encouraged me to see the value of other tribal knowledges in supporting my well-being in a new urban space.

6.1 Introduction

Historic wrong doings by settler groups forced many indigenous communities away from their significant places and the narratives embedded in these sites (Wilson et al., 2018). Moreover, many indigenous communities have been marginalised within urban spaces, experiencing increased disconnection from culture, higher levels of poverty as well negative health outcomes (Figueroa-Huencho, Lagos-Fernández, Manriquez-Hizaut & Rebolledo-Sanhueza, 2020; Weaver, 2012). Those who migrate away from traditional territories have historically found difficulties in adapting to new environments such as the urban space as they can often experience disconnection from tribal identities (Grau & Aide, 2007; Tapsell, 2014; Williams, 2015). The adaptation to urban environments tests the capabilities of urban peoples to maintain their traditional practices and connections to home while altering their behaviours to suit their new environments (Grau & Aide, 2007; Berkes, 2012). This movement from tribal lands to new territories has been seen in the migration of Māori from rural to urban spaces, where cultural practices, knowledge and identity change over time (Bedford et al., 2004; Haami, 2018; Nikora et al., 2004; Tapsell, 2014). Identities within the urban space have often challenged Māori who may be limited in connecting back to traditional tribal territories (Williams, 2015). For those who migrated to urban spaces, the application and sharing of cultural practices and knowledge can be seen in urban Māori institutions like urban marae, kōhanga reo, kura Kaupapa Māori and in some cases, through the naming of urban areas (Barcham, 1998; Haami, 2018). These efforts were part of the Māori renaissance that took place in the late 1970's and subsequently reinvigorated the recognition of Māori issues in Aotearoa as well as reclaiming the culture that was damaged as a consequence of colonisation (Barcham, 1998; Walker, 1999). The migration of Māori to the urban space has also created identities culminated under the urban

Māori umbrella that captures the movement and occupation of Māori in urban areas. Ways to identify those living in both their tribal and non-tribal territories like 'Mātāwaka' (Kukutai & Pawar, 2013; Ryks, Pearson & Waa, 2016) and 'Mana Whenua' (Bargh, 2016; Gagné, 2016: Ryks et al., 2019) capture levels of mobility, mana and connection to the urban place. These changing identities suggest that urban spaces are mediating new knowledges about people and culture that may pose new challenges, as they draw from and adapt connections with histories and place. The changes in identity form new ways of undertaking cultural practices and the interpretation of cultural knowledge (King et al., 2018). This chapter explores how ideas of people and culture may influence how kaitiakitanga is undertaken in urban places. Two key aims have been employed to explore the value of people and culture in kaitiakitanga practices in urban Kirikiriroa. These aims will:

1. Evaluate the relationships between demographic aspects and kaitiakitanga knowledge; and
2. Understand how the role of hapū may influence kaitiakitanga practices in urban spaces.

Data from the survey, focus groups and interviews will be explored separately in this chapter with a final discussion section. The overall aim of this chapter is to highlight the need to consider people and culture in how we undertake kaitiakitanga in the urban space.

6.2 Methods

Detailed information about the methods used for data collection can be found in Chapter 3 of this thesis. Details about the questions used can also be found in Appendix 3, 4 and 5. NVIVO was used for this data to code key themes inherent in the participants data. In addition, Qualtrics was also used to analyses relationships

between variables of the participants data through a chi-squared test. In this chapter, graphs have been used to present data in summary form from the survey. Tables have also been incorporated across this chapter to present participants discussion on key topics.

6.3 Survey Results

This section uses data from the survey pertaining to information about the participants age, income, identity, and their cultural understandings related to kaitiakitanga. The data provides insight into demographic information that may enhance or influence understandings and practices of kaitiakitanga in the urban space.

6.3.1 Age

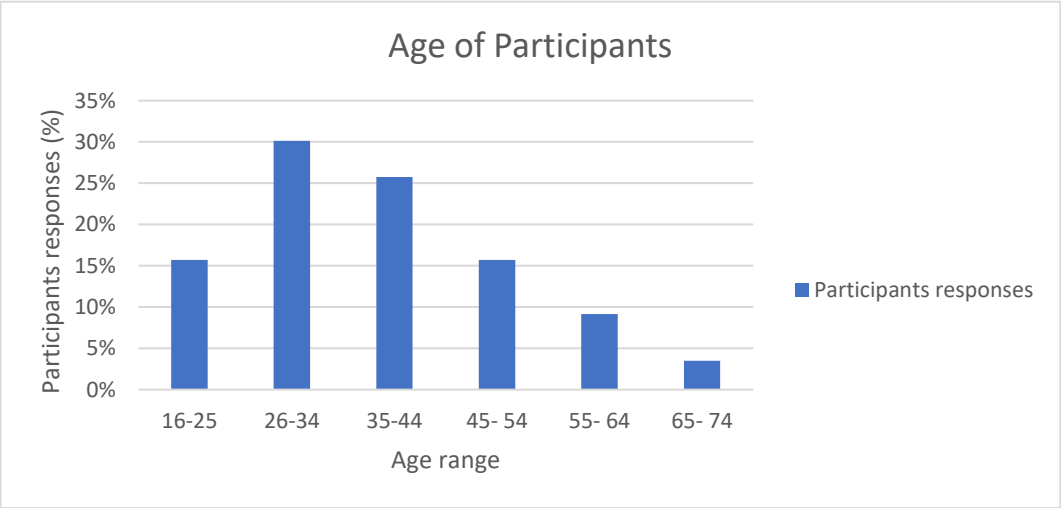


Figure 6.1 - Age of participants

The age range of participants shows the highest response in the 26-34 age bracket followed by the 35-44 age bracket. There were low responses from participants in the 65-74 age bracket.

The age of participants is shared in Figure 6.1 which highlights a large proportion of responses aged between 26-34 (30.13%) and 35-44 (25.75%). The age groups of 16-25 and 45-54 received the same responses rate of 15.72%. The chart further demonstrates lower responses from the 65-74 (3.49%) age bracket and the 55-64

(9.17%) age bracket. Figure 6.1 highlights over half of the participants are aged between 26-44.

6.3.2 Income of Participants

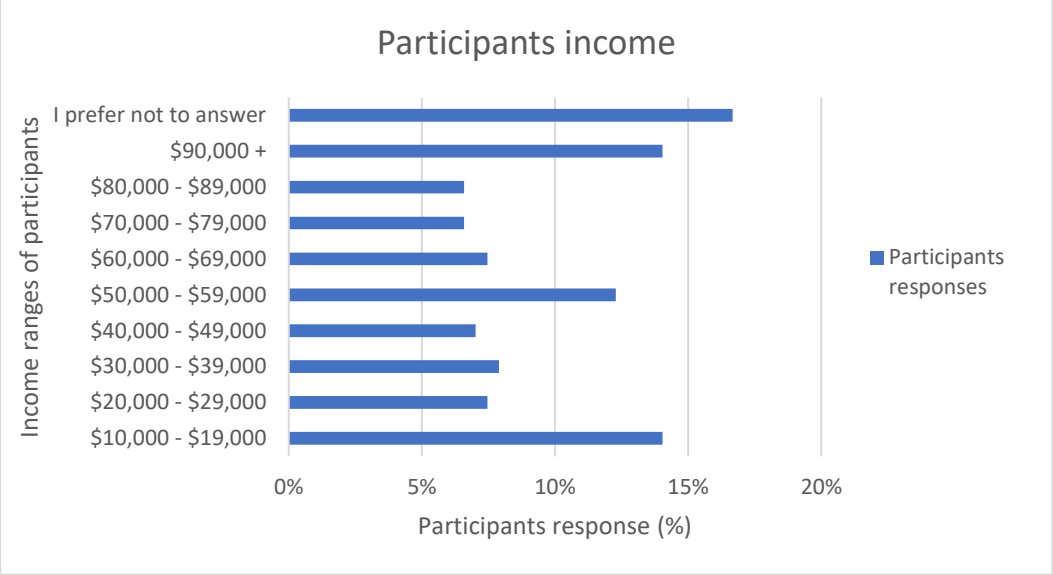


Figure 6.2 - Survey participants income

The highest response rate related to participants incomes were seen in answers like the 'I prefer not to answer' category, $90,000+ and the $10,000-$19,000 categories. The income range of participants was relatively spread across all categories.

There was a large proportion of participants from both low-income earners and high-income earners that responded to the survey (see *Figure 6.2)*. Categories with the highest responses are noted as 10,000-19,000 (14%), 50,000-59,000 (12.28%), 90,0000+ (14%) and 'I prefer not to answer' (16.67%) (*Figure 6.2*). All remaining answers were relatively low in comparison to the highest responses and were shown as listed under 8%. This data reports no consistent trends in the income categories but highlights more responses from the low, medium and higher income brackets (see *Figure 6.2*).

6.3.3 Identity

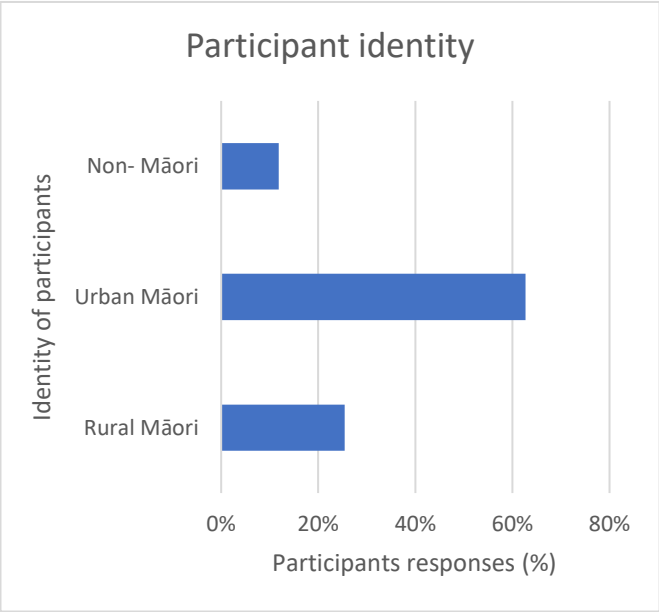


Figure 6.3 - Survey participants identity

Most participants of the survey identified as urban Māori. There were low responses from those who identified as rural Māori and non-Māori.

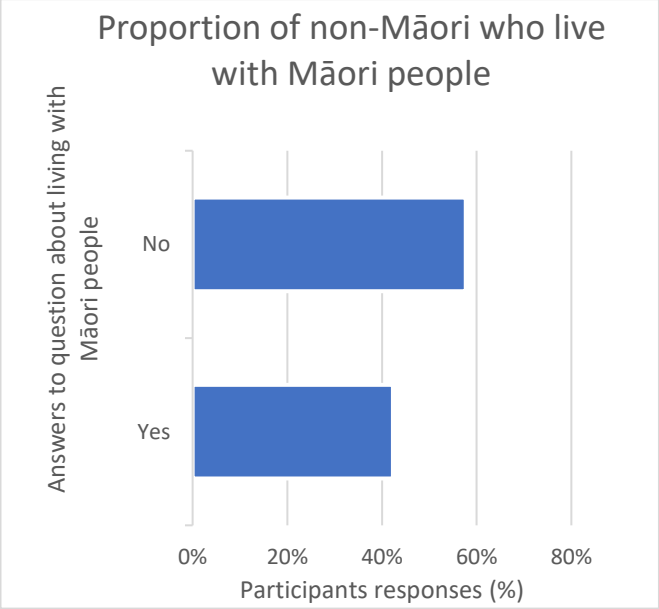


Figure 6.4 - Non-Māori participants living situation

Of the non-Māori participants who answered the survey over 55% shared they did not live with Māori people.

Participants were asked how they identify themselves choosing answers such as Urban Māori, Rural Māori, or non-Māori. Over 60% of participants identified as urban Māori while 25% identified as rural Māori (*Figure 6.3*). Eleven percent of respondents identified as non-Māori. Those who responded as identifying as non-Māori were asked if they lived with Māori people. Forty two percent of these respondents lived with Māori while over 55% of non-Māori participants did not live with Māori people (*Figure 6.4*). There was clear recognition by participants about how they identify themselves as most reside in urban spaces. There were also non-Māori who engaged with the survey

which could suggest a growing interest by other ethnic groups of people about Māori cultural knowledge and practices.

6.3.4 Knowledge of Kaitiakitanga

Participants of the survey reported different interpretations of what kaitiakitanga meant to them. Responses varied between the participants, some noting that they had limited knowledge whilst others explicitly stated that they were kaitiaki.

Key themes from these responses were related to connection to land, guardianship, protection, different Māori gods, and culture as well as the protection of both physical and metaphysical aspects like mauri and wairua. Table 6.1 highlights some discussions shared by the participants about their kaitiakitanga knowledge, the kaitiakitanga aspects evident in their discussion and if the participants identified as urban or rural Māori.

Aspect of kaitiakitanga	**Quotes from survey participants**	**Urban or rural participant**
Some knowledge, limited access in schools	*"I know a little about Kaitiakitanga, I wish it was taught more in schools due to my parents not being able to teach me due to them not being brought up in our own culture."*	Rural Participant
Gardening, responsibility, interaction with the environment, physical and spiritual aspects	*"My Mother did teach me about gardening and wairua and the importance of looking after the earth and our bodies."*	Urban Participant
Guardianship, engagement with nature, whakapapa	*"Often translated to guardianship but it encompasses more than just that. To me it is about taking responsibility for the way that we act/interact with our environment. Acknowledging the whakapapa of all things and living true to tikanga principles."*	Rural Participant

Protection, managing the environment, Māori worldview, knowledge, knowledge transfer	*"It is guardianship and protection....It's a way of managing the environment based on the Māori world view. Transformation of knowledge onto the next generation."*	Rural Participant
Protect and care for nature, teach and practice kaitiakitanga, knowledge transfer	*"Kaitiakitanga to me is how we protect and care for the land, sky and moana as well as one another. As kaitiaki we need to teach, practice and show our tamariki and mokopuna how we actively maintain and do this."*	Rural Participant
Harvesting of resources, sustainable practices, balance, mana, valuing relationships	*"I know how to respectfully harvest for the ongoing health of the plant. I do my best to protect and nurture my natural surroundings by reducing household waste. I only take what I need from the environment and try not to upset the natural balance of things.* *I have trouble establishing whether it is okay for me to harvest from certain places as I am not Mana Whenua. I have made contact with the local marae and found out what I can harvest for rongoā. I see the Mana Whenua as the kaitiaki of my suburb and look to them for leadership."*	Urban Participant
Caretakers of taonga, future generations	*"we are the kaitiaki of our whenua, our waterways, native fish, tuna, traditional kai, manuscripts, photo's, kōrero from the old people, it is up to us to ensure that we leave our taonga in the best condition for the next generation."*	Rural Participant
Philosophy of protection	*"Kaitiakitanga is a philosophy based on securing, protecting, and improving for future generations. It's hard work in a money-centric society."*	Urban Participant
Protecting physical realm	*"It is about guarding the environment external of self and within at the same time. To understand that everything in your realm plays it's part and to be ok with these things whilst protecting them."*	Urban Participant

Connectedness, Māori cultural knowledge	*"only what I've been taught by my tūpuna. In summary an interconnected system that involves: manaaki, aroha, mauri, tapu/noa, whakawhanaungatanga ki te tangata me te taiao[creating relationships to the environment], whakapapa, mana tangata, mana whenua, mana atua, mahi, karakia, whakamoemiti."*	Non-Māori Participant
Māori gods, resource protection, recognition of future generations	*"Looking after Papatūānuku. Looking after our kai sources and sustenance resources for future generations."*	Urban Participant
Community support, protection of water	*"At the moment it's about working with local agencies and community groups to keep our area safe and tidy. Cleaning our water ways or waste and rubbish and making others accountable for dumping their paru."*	Urban Participant
Tikanga, protecting nature, Māori knowledges	*"Kaitiakitanga is about exercising your role as kaitiaki to your natural environment. It is a form of guardianship that is exercised in accordance with tikanga to protect the mauri and mana of a place/thing in the environment. I consider kaitiakitanga to be legal obligation according to tikanga, to care for those places I whakapapa to, in order to benefit the collective."*	Urban Participant
Well-being, protection of taonga	*"it's about our interconnectedness through time and space. In regards to the environment, we have a responsibility to look after the environment as they are taonga tuku iho, as are we. Our well-being is reflected in the well-being of all that surrounds us."*	Urban Participant
Reciprocity, modern living, everyday practices	*"We try to live our lives as kaitiaki, as much as possible in a modern world. To me it is about respect and acknowledgement of the gifts from Papatūānuku and Ranginui, reciprocity in giving back, and about continually finding ways to practise kaitiakitanga in our everyday life."*	Rural Participant

Table 6.1 - Aspects of kaitiakitanga

Participants shared their knowledge of kaitiakitanga. Key themes such as guardianship, wairua, protection, care of nature are evident in participants

discussions. Both rural and urban participants shared their understanding of kaitiakitanga which further highlighted similarities and differences in their kaitiakitanga knowledge.

Participants were also asked how comfortable they felt in talking about kaitiakitanga on a scale of 1 to 5 with one being very difficult and five being very comfortable. Responses to this question also varied with answers listed as very easy (34.75%), easy (41.84%), moderate (12.77%), difficult (7.8%) and very difficult (2.84%).

Figure 6.5 reports over half of participants stated that they were very comfortable in discussing kaitiakitanga. There was also a large response rate to the easy category as well as low responses from the difficult and very difficult categories which further shows that participants were comfortable in discussing kaitiakitanga from their own perspectives (*Figure 6.5*).

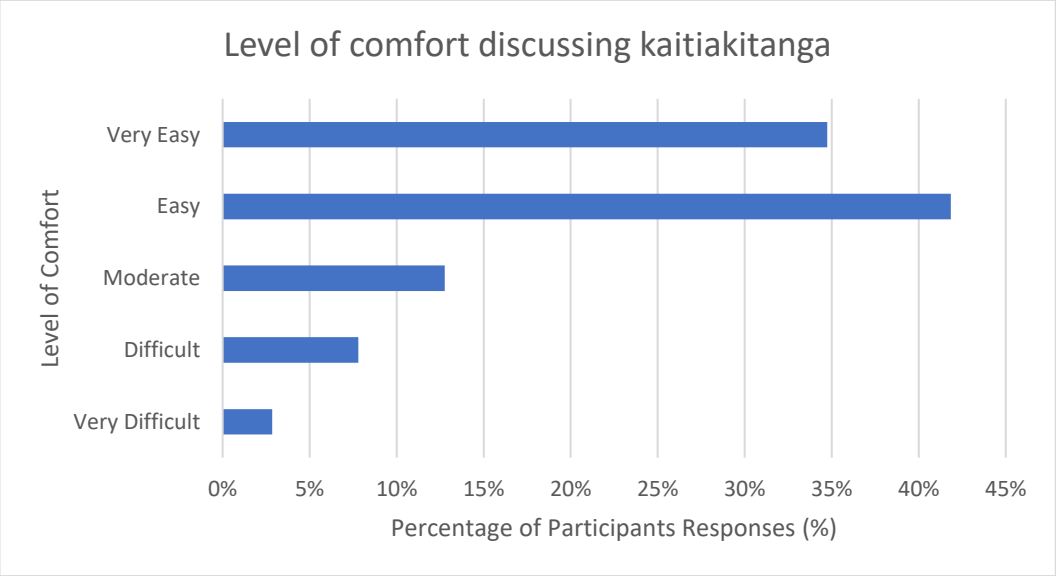


Figure 6.5 - Discussing kaitiakitanga

Over half of the participants were comfortable in discussing kaitiakitanga with higher responses in the ‘very easy’ and ‘easy’ categories. As most were sharing their own perspectives of kaitiakitanga, this potentially contributed to this level of comfort.

Participants were asked how they received the knowledge that they hold about kaitiakitanga. Participants had the option to choose multiple answers about how they received their knowledge such as passed down from someone, read about it in a book, learnt through practice, watched others practice kaitiakitanga and an 'other' category. Responses for this category were high in answers like passed down from someone (28.75%), watched others practice kaitiakitanga (25.75%), learnt through practice (24.25%), and relatively low in read about it in a book (15.5%) and the 'other' (5.75%) category.

Participants highlighted that knowledge passed down from someone, followed by watching others practice kaitiakitanga and learning through practice were common forms of learning about kaitiakitanga. Comments captured through the 'other' category noted that participants information came from institutions of learning such as school or university or that they researched and learnt about the concept on their own. Upon further analysis, of those that highlighted learning about kaitiakitanga by someone passing the knowledge to them, over 68% identified as urban Māori, while 29.7% were rural participants. Responses for learnt through practice shared similar trends with urban Māori making up 65.3% of the total response and rural Māori responding with 32.5%. Watching others practice also showed that 68.3% were urban Māori and 29.7% were rural Māori participants. The data highlights that all three methods may be important for learning about kaitiakitanga regardless of our residence in rural or urban areas.

The participants were asked about aspects that may impede on their kaitiakitanga practice with answers listed as laws and policies, neighbours, space, limited knowledge and an 'other' category. Responses to this question noted 24.39% for laws and policies while limited knowledge received the largest response rate of 33%

(*Figure 6.6*). Such provisions could relate to the gathering of traditional resources as most respondents were gathering their resources from their home addresses (*Figure 6.6*).

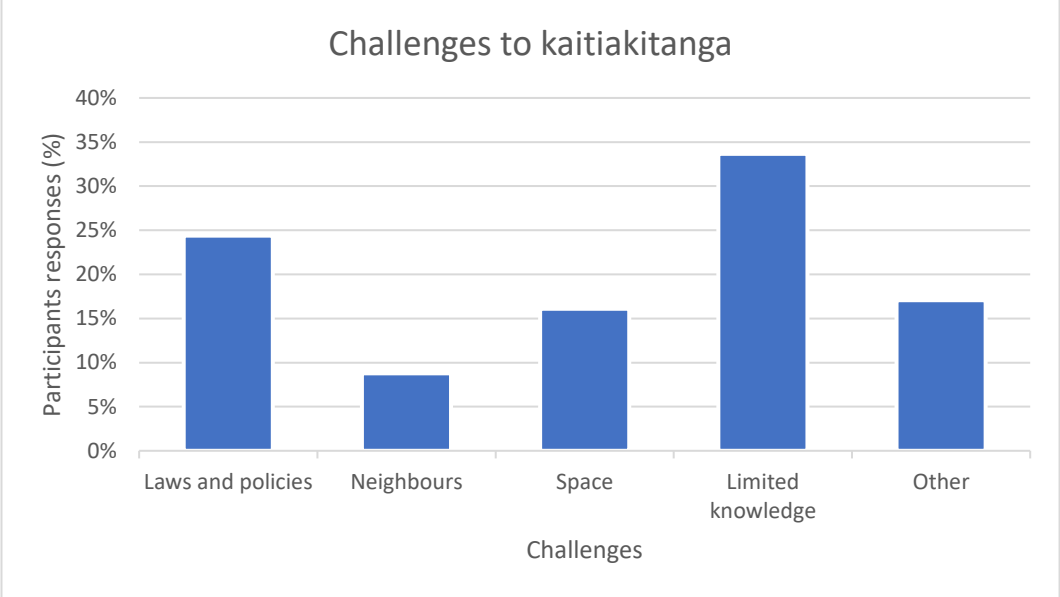


Figure 6.6 - Challenges for kaitiakitanga

Limited knowledge was seen as the biggest challenge to kaitiakitanga practices, followed by laws and policies. Adequate space to undertake kaitiakitanga was also highlighted by participants as a challenge for kaitiakitanga practice.

When asked if these challenges stop participants kaitiakitanga practice 81% said yes, while 18% stated it did not stop them from practicing. This data depicts the different ways we might learn about kaitiakitanga but also how these practices may become challenged in urban space. More importantly, the data could support the relationships between strong childhood teachings of kaitiakitanga and the potential to carry these practices through challenges in urban areas.

6.3.5 Hapū Knowledge

Participants were asked if they knew the hapū in their residential area and were given three options to choose. The answers report that 45% of participants knew the local hapū in their area while 36% did not (*Figure 6.7*). Additionally, 18% of

participants of the survey identified as members of the local hapū where they reside (*Figure 6.7*). There were also low responses from participants who were local hapū members which could further be attributed to the large number of participants living away from their tribal groups.

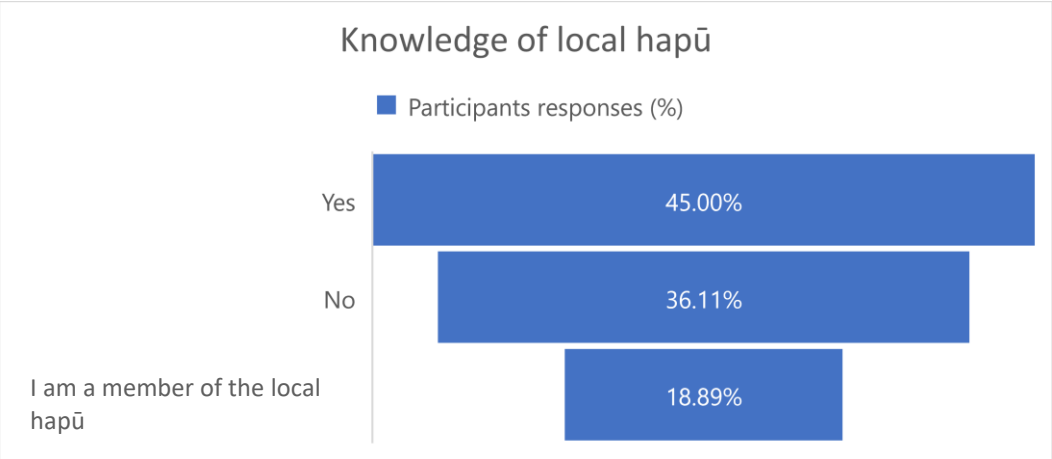


Figure 6.7 - Knowledge of hapū

Most participants knew or held knowledge about local hapū. However, there were participants that did not know about their local hapū as well as participants who were local hapū members.

Survey respondents were then asked if they engaged with local hapū in their area with 63% stating that they did engage with local hapū and 28% not engaging at all with local hapū. Delving deeper into this data, gender provides further understanding about those who engage with local hapū. Figure 6.8 indicates that engagement with local hapū can vary between genders. This could indicate different engagement practices being undertaken by participants in their urban areas with local hapū. Figure 6.8 further highlights interest by female participants to engage with local hapū even when they had not done so previously.

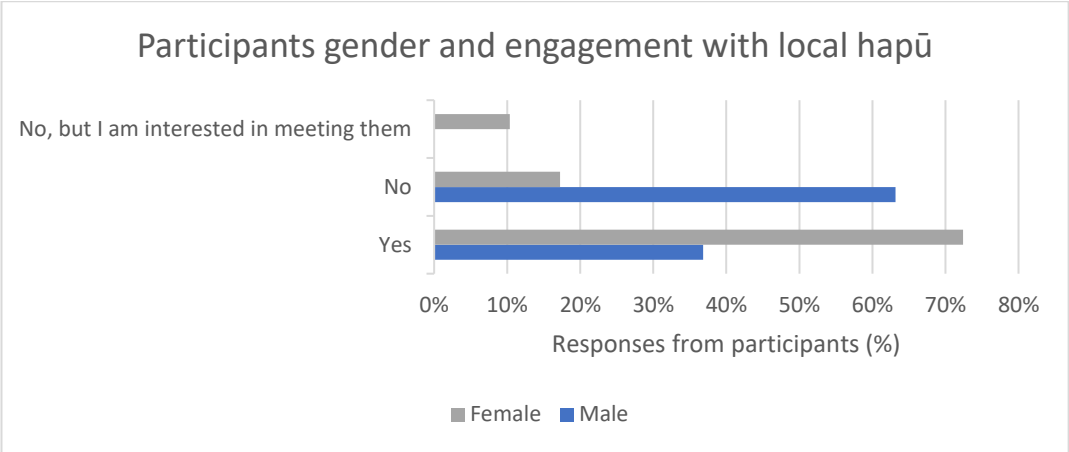


Figure 6.8 - Gender and hapū engagement

This chart shows the engagement of participants with local hapū along with their gender. Female participants seem to engage more with local hapū of their area where they reside (X^2 (2, N = 77) = 6.1, p <0.001).

6.3.6 Kinship and Spirituality

Kinship relationships were described by the participants that included connections to other Māori people and entities of the natural world. These relationships where often discussed in narratives pertaining to Papatūānuku and the need to preserve the knowledge associated to her. Furthermore, kinship relationships were discussed in detail in relation to the participants connections to their own families and the important knowledge shared between themselves and their whānau. This holistic approach to nature expresses the value of Māori narratives in embedding relationships to nature and further solidifying obligations within kaitiakitanga practices (*Table 6.2*).

Aspect of kinship or spirituality	**Quotes from survey participants**
Care of whānau, whenua, regulating behaviour	*"I know to take care of myself, my whānau, the whenua, the taiao, water, all things. So everything lives and is cared for. That is my role in kaitiakitanga, how we behave and think has a part to play."*
Recognition of Māori gods; relationships to birds, tree, fish,	*"Ka puta te uri ko Ranginui i moe i a Papatūānuku, ka puta ko ngā Atua. Tā ngā atua ka puta ko ngā moana, ngā maunga, ngā awa, ngā ika, ngā rākau, ngā ngārara, ngā manu, te ira tangata me te aha anō*

invertebrates, and people	*hoki. were all connected!!! There is no separation. [The descendants of Ranginui and Papatūānuku are the different gods who care for the seas, mountains, rivers, fish, trees, bugs birds, people and more].”*
Spiritual connection, physical connection, connection to whenua	*“For myself, kaitiakitanga is understanding the whenua, having a connection to te whenua. This is built by not only a physical connection but a spiritual connection. This can be built by storytelling to tamariki, being raised in an environment that you feel as though you can connect, gather and nurture the land.”*
Whakapapa, origins of atua, recognition of mauri and spiritual forces	*“A knowledge of whakapapa and our origins from the atua and our role as kaitiaki. Protection of our natural resources their mauri and their life and spiritual forces without which we can't existence as Māori and as people.”*

Table 6.2 - Aspects of kinship and spirituality

Discussions shared by participants about aspects of kinship and spirituality were evident in participants kaitiakitanga discussions. The participants further show the importance of Māori cultural knowledge in articulating kaitiakitanga knowledges.

The concept of spirituality was not explicitly discussed in silo to other cultural knowledges by participants and there were many mentions of spiritual aspects or phenomena that supported participants understanding of kaitiakitanga and participants connections to the environment (*Table 6.2*). This spiritual connection is reinforced through cultural practices that emanate the narratives of ancestors through to future generations such as relationships to waterbodies and sites of significance. Furthermore, spirituality was expressed through understanding aspects such as mauri, wairua and the various animal kaitiaki that exist in the natural world (*Table 6.2*). These spiritual connections were further attributed to creation narratives of Ranginui and Papatūānuku and furthermore, highlights the interconnectedness of Māori to both the physical and spiritual worlds and their importance to kaitiakitanga knowledge and practice.

6.4 Focus Group Results

The survey has demonstrated areas where kaitiakitanga may be influenced by age, gender, levels of comfort and levels of knowledge. The focus group data explores knowledge of kaitiakitanga and the challenges faced by participants in undertaking this practice.

6.4.1 Kaitiakitanga Knowledge

Figure 6.9 - Image related to kaitiakitanga knowledge

This image shows the responses by the Focus group 1 participants about their knowledge of kaitiakitanga.

Participants were asked to share their thoughts about kaitiakitanga (*Figure 6.9*). Table 6.3 shows responses that highlight deep connections to nature and cultural knowledges of Māori. Participants of Focus group 1 shared ideas of stewardship and guardianship. However, there were also other aspects that participants felt were important to their understandings of kaitiakitanga such as connection to Papatūānuku and Ranginui, and relationships to nature and people. These ideas coupled with understandings of stewardship and guardianship emphasise the need for natures protection. There was also a large proportion of the participants who recognised the holistic connections to all beings and features within the nature world including people, waterbodies and landscapes.

Focus group	Themes	Quotes from focus group participants
1	Stewardship, Papatūānuku, holistic connection	*Stewardship of the land, connecting and protecting Papatūānuku, remembering all creatures/plants on earth are connected - all our actions impact others. We have a responsibility to care for this earth."*
	Guardianship, Papatūānuku	*"My understanding of kaitiakitanga comes from its translation of protection and guardianship. I have taken that and created my own environmental protection of Papatūānuku around me."*
	Stewardship, responsibility	*"Stewardship, relationship with respect, caretaking with responsibility."*
	Guardianship, nature, protection	*"Guardianship over land, water, places. Protection."*
	Needs of land and people	*"Caring for and understanding the needs of the land and its people."*
	Connection, responsibility	*"The idea that we are connected or a part of everything therefore, responsible for its care."*
	Care	*"Appreciation, care of place."*
2	Need to protect resources, wisdom from elders	*"when my grandmother was alive and she talked about you know back then, back then I was standing in one of our nice freshwater creeks back home, and she said you know ka tae ki te wā ka hoko koe i tēnei wai e tere nei. [there will come a time when you will buy this water]."*
	Care of taonga	*"tiakina ngā taonga o te ngahere, tiakina ngā taonga o te moana. [take care of the treasures from the forest and the sea]."*

Table 6.3 - Focus groups knowledge of kaitiakitanga

The discussions shared by participants about undertaking kaitiakitanga as well as some of the rationale behind their practices highlighted both physical practices and learning opportunities. This ranged from lessons taught to them from elders to expressing ideas of stewardship.

As with the comments from the participants of Focus group 1, Focus group 2 also made reference to the importance of the environment to kaitiakitanga. In particular, participants discussed the varying environmental practices that they undertook as children that further informed how they viewed kaitiakitanga (*Table 6.3*). One participant noted that their grandmother played a pivotal role in showing the importance of the environment and the risk when nature is used for commercial gain. These experiences as children created a bond between the participant and the environment and grew their appreciation for nature in their later years.

6.4.2 Challenges for Kaitiakitanga

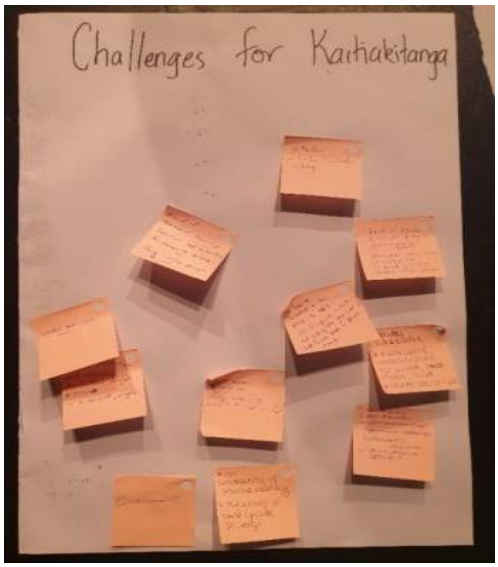


Figure 6.10 - Image related to challenges for kaitiakitanga by Focus group 1

This image shows the responses by the Focus group 1 participants about the challenges they face in undertaking kaitiakitanga in urban areas.

The participants reported challenges facing kaitiakitanga as impeding on their kaitiakitanga practices (*Figure 6.10*). Multiple aspects surfaced through Focus group 1 about these challenges for kaitiakitanga that include disconnection from place, lack of knowledge, the restrictions by local government laws, limitations of space, limited resources and limitations in time to commit to kaitiakitanga activities (*Table 6.4*).

The limited connection to place was highlighted as a key theme that challenges participants application of kaitiakitanga in the urban space, particularly a lack of connection with local hapū and not acquiring the appropriate knowledge for the participants resource collection. Having the appropriate space and knowledge to

undertake kaitiakitanga was challenged in urban spaces. Comments about the lack of community to reaffirm cultural practices was also noted by participants as a challenge to kaitiakitanga.

Focus group	**Type of challenge**	**Quotes from Focus group participants**
1	Disconnection	*"Lack of connection and interaction for kaitiakitanga to occur in a concrete jungle."*
		"Not feeling connected to the place, too busy, little/few places to access, not feeling like you can talk for the area or know enough."
		"Disconnected to self, therefore wider environment, economic restraints, systematic racism with urban space."
	Lack of space	*"Limited green areas, access."*
		"Concept of communal ownership, individual responsibilities for community spaces, sharing and caring concept for all."
		"Lack of space (not able to [do] home garden/vege garden/tree), pollution/over-use of resources, lack of connection and support from people."
	Limited knowledge	*"Pollution, restricted knowledge, safety."*
2	Different worldviews	*"about a month ago there was about 12 of us kaitiaki from Kāwhia that went across to Raglan to stop ... taking [of] the kai like little mussels like that, little fish like that, snapper, they were taking them, and about a month ago the cops raided them, raided these people, they wouldn't listen to the kaitiaki you know."*

	Systemic issues	*"well I think one of the biggest challenges is the system, that is the biggest challenge. You know having to contend with bureaucracy all day everyday."*

Table 6.4 - Challenges for kaitiakitanga shared in the focus groups

The challenges that participants experienced in undertaking kaitiakitanga ranged from limited knowledge to limited connection to place. Such experiences were also predominately shared by Mātāwaka participants.

Participants of Focus group 2 were also asked to discuss what challenges they thought impede on their practice of kaitiakitanga. Answers to this question varied from having to deal with colonial systems that do not align with mātauranga Māori, to overuse and taking of resources (*Table 6.4*). The disconnection from nature was also highlighted by the participants as a way that challenges their practice of kaitiakitanga. Participants also highlighted that as they grew older their priorities for practicing kaitiakitanga had changed. In addition, a lack of knowledge by other ethnic groups about the importance of nature to Māori cultural practices was also discussed (*Table 6.4*).

Focus group 2 highlighted the importance of connecting their grandchildren and children to their traditional homelands and the knowledge the participants held. This would often be a time-consuming process for participants, but they stressed that this process was important for the longevity of their tribal knowledges. Sharing this knowledge allowed the participants children to connect back to their homelands but also, to navigate the urban space alongside the participants.

The current challenges discussed by the participants as causing hinderance to their practice of kaitiakitanga are related to resource collection, acquiring local knowledges, and creating connections to new spaces. These challenges highlight emerging themes around the importance of knowledge and practice in how we

connect to nature and continue to support the development and longevity of our systems of knowledge.

6.5 Interview results

The focus groups and survey have illustrated how kaitiakitanga is understood but also the challenges we might face in undertaking this practice in urban spaces. The interviews provide an opportunity to further delve into experiences and knowledge of kaitiakitanga by sharing information about the interview participants, their understandings of kaitiakitanga, the challenges they experience, how they connect to local hapū and perceptions of the urban space.

6.5.1 Participant information

All interview participants were asked to introduce themselves and discuss their occupation. The majority of the participants were either involved or connected to a tertiary institution or were heavily involved in community projects undertaken by their whānau, hapū or organisation. Each individual shared information about their employment status but also why they undertook their current positions. The employment role of participants ranged from tertiary positions, managers of technology hubs, trustees of whānau and hapū lands, students, rongoā practitioners, astronomers, kaumātua, business innovators, childcare centre managers and scientists. Location, family ties, remuneration and opportunities for education were key factors in why the participants chose their current fields. Family responsibilities to their hapū and wider communities were also considered in the choice participants made about their current employment; but also why they continue to reside in Kirikiriroa. In discussing their current employment status, the participants shared how they held many forms of commitments to Kirikiriroa and to the places that they grew up in. This required the participants to continuously move between Kirikiriroa

and their childhood homes to support the development of their homelands. All participants were of Māori descent but resided in Kirikiriroa for different periods of time. This coupled with the access to work prospects ensured that participants could still support their own hapū and whānau while developing their future work opportunities.

6.5.2 Meaning of kaitiakitanga

The participants came from different tribal territories and upbringings therefore, their understandings of kaitiakitanga are largely based on both their experiences in their homelands and their experiences over the course of their lifetimes. Kaitiakitanga according to the participants, encompassed the care and protection of the environment but also the care and protection of people and culture. Although this is very similar to the participants of previous chapters, Table 6.5 shares discussions about the need to ensure that both people and nature function together through undertaking cultural practices. This cultural understanding has enabled the participants to refine their practices to ensure they are operating in harmony with nature. In supporting this harmony, participants highlighted the importance of whakapapa in understanding the important role of people in the practice of kaitiakitanga (*Table 6.5*). This idea enabled an awareness for participants in how much they could practice kaitiakitanga in different tribal areas. One participant noted that their understanding of kaitiakitanga was related to people and the process of caring for people, which was often related to ideas of food harvesting and sharing resources (*Table 6.5*). The participants highlight the role of nature in supporting the well-being of people and the value of cultural practices to mediate relationships between people and nature.

Kaitiakitanga aspect	Quotes from interview participants	Mana Whenua or Mātāwaka
Circle of life, return to Papatūānuku, living in harmony	*"it's like the circle of life. You take, meaning we eat plants and things, and we live beside all other living things and there's also a time you give, you return back to Papatūānuku, you give back. To me it's our connection, living in harmony with all other things around us and understanding its purpose."*	Mātāwaka
Whakapapa, sustainable practices, empowering hapū and iwi	*"so in a nutshell kaitiakitanga means to me, in order to be a kaitiaki you need to have whakapapa to the rohe that you are a kaitiaki of, you have to have the genealogical connection and then you ought to be engaged in those practices that are sustainable that are empowering iwi and hapū as well as future generations."*	Mātāwaka
Nurturing, motivating, kai, supporting whānau	*"I've come to realise that kaitiakitanga, really it's a way in which, basically it's just living, it's about nurturing it's about when you look at kai, kai we eat, we just look at tiaki, its supporting, its nurturing its motivating it's all these things, whether it's for yourself and for your whānau."*	Mātāwaka
Engagement with nature; daily living	*"So our engagement with Tangaroa engagement with our rivers our ngahere were just part and parcel of our kind of daily living situation."*	Mātāwaka
Language, children, knowledge transfer, protection of taonga	*"my desire for the language, and my wish for my children to learn te reo Māori, introduced me to supporting the kōhanga reo, the then new kura kaupapa movement and, you know, I was driven by the thought of being a guardian and creating environments where te reo Māori could be spoken."*	Mātāwaka
Environmental guardianship; applicable in life; being mindful	*"it has lots of meanings to me, but probably environmental guardianship is what comes to mind first, but when you break down kaitiaki and kaitiakitanga, you can apply it to anything in life. I think it's just being mindful that we are all stewards of something and to look after that."*	Mātāwaka

Supporting other kaitiaki, ethics	*"you can be supportive of the ethic, the practice of kaitiakitanga in an urban setting without necessarily having to be a kaitiaki. So you can actually help all kaitiaki in their practices or in their aspirations."*	Mātāwaka
Passing of knowledge	*"I think for me it's more my dad, because you know growing up, I didn't get his way or didn't like his ways. But now that I'm older and I have boys I'm a lot like my dad, not extreme but I'm more like my dad than I'd like to admit. So obviously I think that's good for them, I guess it's that intergenerational, passing down stuff and I think that's kaitiakitanga, passing on stuff down to the next generation."*	Mātāwaka
Responsibility for set time period, for particular aspect	*"I don't think I really heard kaitiakitanga until I started to get a bit older to be honest, I thought it was a bit of a new term. But you know its stewardship, all your acknowledging is that you've got responsibility for a certain period of time and you just basically run that responsibility while you've got it. And that's what kaitiakitanga means and in any context. So for me there's a financial context for the tribe, there's a land context in terms of the papakāinga work, setting up papakāinga around the country is about making sure people have a connection to land, because once they got a connection to land, they treat it differently, so that's the whole point of getting people to understand why you need a papakāinga. Making connection, then people look after it properly. In terms of Raglan, because our family lived on the land, we had a very different relationship with other people who didn't live on that land. Just because you are physically present, physically having a connection with it. So I think that led us to have an intense willingness to put time and effort into that land."*	Mana Whenua
Reciprocal relationships, applicable to whānau and nature	*"For me it means that reciprocal kinda relationship that the things that we feel responsible to, to care for and look after are doing the same back for us. Like with our whānau, you care and look after your whānau and in turn, they do the same*	Mana Whenua

	thing. So I think that's a key element to kaitiakitanga is that reciprocal relationship. And I think again, we've narrowed it down largely into thinking about just environmental stuff."	

Table 6.5 - Meaning of kaitiakitanga by interview participants

The meaning of kaitiakitanga to participants shared both similarities and differences. Both Mana Whenua and Mātāwaka shared similar perspectives of kaitiakitanga which ranged from both physical and spiritual connection to people, place and nature.

For some participants, nature played an important role in how participants perceived kaitiakitanga. Being amongst nature reinforced the responsibility of participants to their areas but also contributed to their well-being and application of other cultural practices. However, the engagement of participants with nature was not only about physical obligation but also the opportunities to enquire into their understanding of spirituality through nature. These ideas often included references to atua and were further shaped by the experience participants shared with nature and intrenched in their everyday activities as children. Some participants noted that their form of kaitiakitanga practice was related to the preservation and protection of language. Given the special nature of the Māori language, one participant stated that the care and protection of this aspect of the Māori world was important to learning about kaitiakitanga. Kaitiakitanga according to the participants could be broken down to show that it is applicable to all aspects of their lives.

Kaitiakitanga from this perspective moved beyond focussing solely on the natural environment but emphasised a unique relationship that is reciprocated between people and nature. Moreover, participants shared the ways in which Mātāwaka could support these principles in the urban space by supporting the efforts of kaitiaki from local hapū. In addition, the role of people or groups of people further

contributed to how participants understood kaitiakitanga. Participants noted that whānau members were often the reason as to why participants continued to practice kaitiakitanga as they wished to uphold and maintain the intergenerational knowledge from older generations. This responsibility to these people were usually carried out through a form of practice such as gardening, whaikōrero or food harvesting.

6.5.3 Challenges to Kaitiakitanga

As with valuing kaitiakitanga as a way to create nature relationships, there are also challenges to undertaking this practice in urban spaces. When asked about the barriers that stop participants from practicing kaitiakitanga these responses included factors such as limited knowledge and commitment. For some of the participants, there were no barriers that prohibited their application of kaitiakitanga in the Kirikiriroa area. This idea was mainly presented by those of Mana Whenua decent and those who explicitly stated that they did not practice kaitiakitanga in Kirikiriroa. Some participants of Mātāwaka decent noted that they did not feel restricted to apply kaitiakitanga in Kirikiriroa as they were practicing general forms such as gardening and recycling. Table 6.6 captures some of these thoughts expressed by participants of the interviews.

Challenges	**Quotes from interview participants**	**Mana Whenua or Mātāwaka**
People	*"I don't think there would be anything that would stop me from applying values in what I do, but other people definitely would challenge the ability to apply kaitiakitanga."*	Mana Whenua
Modern living	*"In some cases modern living, on the go, modern living really, that's the only thing, and the lifestyle we choose with working and studying."*	Mātāwaka

Ability to carry-out kaitiakitanga	*"It comes back to priorities, it comes back to capability, capacity and also around the willingness to be able to carryout kaitiakitanga. What are the strategies to actually encourage people to overcome those barriers, education is one."*	Mātāwaka
Time, lifestyle, choices, convenience	*"Time ,lifestyle kind of in the space of what do you call it? want it now need it now, gotta do it now, what's that called fast pace the kind of, that instant stuff kind of instant living. Yeah, ... I suppose at times takes precedence over kaitiakitanga at times you know what's convenient for my family? What can do me good right now what's easier and convenient as well. ....Yeah, so probably convenience will probably inhibit, I think, kaitiakitanga."*	Mātāwaka
Validity of knowledge, support	*"In some cases, some people don't see the validity is there anymore. So well some people might think they, you know, some of our whānau whose dogmatic religious fundamentalist, don't want to know so I might be working with their whānau introducing reintroducing notions of kaitiakitanga."*	Mana Whenua
Better support for sustainable practices	*"I suppose I feel like the Kirikiriroa city council's recycling needs some work. Well, yeah, suppose if we didn't have a recycling kind of system, then what would everybody do with their recycling? they'd probably just chuck it in the rubbish like they used to. So I think those kind of things, council policies around the environment have an influence Maybe iwi regulations and stuff as well. But other than that I think it's just up to the person to do it."*	Mātāwaka

Engagement with council, businesses that damage the environment	*"Would be the local iwi if they weren't happy with a particular thing that I was doing....I would adhere to what they say. Councils at time. You know, I think the council's do a good job in many ways... I would like to believe this belief in what we need to do to ensure the long term survival of our environment thats kaitiakitanga and waterways and species. But what we come up against is councils that tell us how and when we should do it, councils are an issue. So is big business. You know, so is the big business that you know, bottles our water and takes it away. You know, we're in the Waikato so, you know, I get myself into a bit of trouble saying this, but I really, really hate the dairy industry. The dairy industry, in my mind is the country's biggest polluter and pollutes our environment and our traditional environment, to sell milk products to a group of people."*	Mātāwaka

Table 6.6 - Challenges for kaitiakitanga shared by Interview participants

The challenges faced by interview participants in undertaking their kaitiakitanga practices ranged from limited knowledge, limited support, varying perspectives as well as modern living. These challenges were experienced by both Mana whenua and Mātāwaka participants.

However, when participants did note a barrier, this was usually attributed to aspects outside of Te Ao Māori such as government policy, the urban space itself and lack of resources. The barrier created by the commitments that participants held to both their own lives and childhood homelands was also apparent, as participants felt that they could only contribute to one space at a time. Of particular interest was the comments that participants made in relation to the effects of modernity on their kaitiakitanga practices. Participants noted that modern ideas of living hindered the frequency of their practices. However, these barriers would not necessarily completely halt their kaitiakitanga practices but rather, challenge them to apply it in a different way. Some participants noted that outside entities were not the only barrier to practicing kaitiakitanga, but limited support from their whānau and

friends also impacted their practice in urban spaces. Although, whānau were often supportive of practicing kaitiakitanga, the commitment to maintain a day-to-day practice was not ideal for some whānau members. However, participants would continue to encourage their whānau to contribute in small ways to a kaitiakitanga practice.

6.5.4 Connection to Local Hapū

Participants were asked about their connections with the local hapū of the Kirikiriroa area. All participants noted they knew about the local hapū and engagement with these hapū varied. Other participants stated that they rarely engaged with local hapū as there were limited opportunities to do so, although within Kirikiriroa, there are opportunities through established Kīngitanga events, some participants were still unsure about the best approach to build relationships with local hapū. Table 6.7 shares insight into levels of engagement with local hapū that participants expressed.

Level of engagement	**Quotes from interview participants**	**Mana Whenua or Mātāwaka participant**
General awareness of hapū	*"Yeah, Ngāti Wairere, Ngāti Hauā kind of on this side Ngāti Mahanga on that side Ngāti Māhuta kind of over there on that way. So yup, kind of aware of like hapū and people around."*	Mātāwaka
Engagement dependant on project	*"At times we have, but not on a regular basis, just depends what sort of projects we have. I work with hapū at home but not in Waikato generally."*	Mātāwaka
Frequent engagement	*"I've been to a couple of Kīngitanga days, helped out with the holiday programme at Hopuhopu that the college ran a couple of years ago. I participated in the Tainui regionals last year."*	Mātāwaka

Frequent engagement, project based engagement	*"Our organisation does, when we're doing anything, in anyone's backyard we have to consult with hapū so for example, the Karearea where our house is being built that was named by Ngāti Wairere because that's their home space, equally out at the base, Mahanga drive."*	Mātāwaka
General awareness, spreading information about local hapū projects	*"I like what that Kahukura Korokī does, even though it's out of Kirikiriroa, they are very active, putting up information about what they are doing. Their eel project, the land restoration project, they've got a honey project. I love how they get the information out there."*	Mātāwaka

Table 6.7 - Level of hapū engagement by interview participants

The engagement and awareness of local hapū by interview participants showed that there was a general awareness that participants had of local hapū and their cultural narratives. However, the engagement with local hapū was largely reliant on person relationships as well as employment relationships.

However, some participants stated that they actively sought out engagement with hapū and would do so through other means such as their children's school trips. The participants noted that their intentions to do so, were not to infiltrate into hapū but to ensure that they could share relevant stories about their place of residence with their children and whānau. This inquiry into local hapū narratives allowed the participants to become more aware of areas of significance, important historical events, and the recognition of the important role of local hapū in urban areas (*Table 6.7*). In addition, this type of engagement ensured that if participants were part of developments through their work organisations, they would have an idea of who they would consult about such projects.

In addition, participants were actively seeking out information about kaitiakitanga projects run by whānau, hapū and iwi within the Waikato area. Although the capacity to fully commit to these projects may be limited in some aspects, the participants expressed an interest in these projects to further help inform their own

appropriate practices of kaitiakitanga in urban areas. The availability of what projects were being undertaken allowed the participants to gage what taonga were being actively protected by local hapū. The data from the participants illustrates that engagement with local hapū in Kirikiriroa occurs in varying ways. There is a desire by the participants to ensure that they are aware of the local narratives that could potentially support better engagement with place and people in Kirikiriroa.

6.5.5 Changing the Urban Space

The interview participants were asked to share their aspirations for the areas that they reside in by discussing the ways they would change their urban space to enable better practice of kaitiakitanga. Participants answers ranged from physical appearances of the urban space to changes in the overall behaviour towards nature and people. Informing these decisions were the desires of participants to carry out practices such as food growing, harvesting of resources, and connecting more with nature (*Table 6.8*). Through these discussions, participants were also able to highlight challenges such as lack of knowledge about gardening, time commitments and limited space. Overcoming these challenges would ease the application of kaitiakitanga in the urban space for the participants.

Changes to urban space	**Quotes from interview participants**	**Mana Whenua or Mātāwaka**
Larger garden	*"yeah, I'd like a big yard so I can do more mahi maara."*	Mātāwaka
Increased knowledge, increased involvement in environmental projects	*"one obstacle would be my lack of gardening knowledge. So if that was not an obstacle to get better at growing my own vegies things like that. Try and have more time to do more environmental activities. Yes, so I suppose other factors are time, money, knowledge."*	Mātāwaka

Less distractions, more engagement in gardens	*"I would grow more food and gardens and stuff like that. I'd have a home in a larger place....I wouldn't be tied to work, I think that stuff is a distraction from kaitiakitanga."*	Mātāwaka
Community spaces in cities for nature engagement	*"I would just love to see the redevelopment of community spaces in the city as they relate to the environment. I would like places where people can pick fruit, they can grow food, they can share seeds, you know, where there might be local talks and local workshops in the actual spaces themselves on the land in the middle of the city."*	Mana Whenua
Community gardens, self - sustaining communities	*"I would like to see investments in massive community gardens, where we moved away from the reliance on big business to feed us and we started to feed ourselves, community orchards, community gardens where people would plant and work communally and then harvest food collectively, very traditional Māori approach. But it makes you responsible back to the community and I think I would, I would like that I'd like to see a bigger investment and focus on protecting waterways."*	Mātāwaka
Supporting more opportunities for kaitiakitanga practices, educational opportunities	*"Engraining in the community, a sense of kaitiakitanga conservation and putting the environment foremost back into the forefront of the minds as well. So what I was saying was we just reverse back to that people start learning about the importance of the environment, on how they can interact with the environment, the things that they can do to improve the health of the environment.* *From that point on, you start seeing the development of outdoor spaces, ones that can cater for things like workshops being delivered. And those workshops are things like you know, kai and food preparation, planting seeds and all that sort of stuff too and then you start seeing that the tangible outputs of kombuchas and pickles and rongoā making and that sort of stuff too."*	Mana Whenua

Changing societal behaviour and expectations	*"I would like to see a complete ban in the Waikato on the dairy industry, complete ban. And I know they're saying about the backbone of the economy. I think that's rubbish as well. The economy needs to change. Yeah, I mean, that's pretty radical. But that's what I'd like to see. I would like to see us move away from living as individuals, silo families in our own houses, where we rely on big business to feed us, to us actually living as communal and actually feeding ourselves collectively."*	Mātāwaka

Table 6.8 - Changes to the urban space

Changing urban spaces to suit the participants understandings of kaitiakitanga were shared by participants. Evident in participants discussions are the need to create communal spaces and reinvigorate local knowledges in public spaces. These ideas were shared by both Mana whenua and Mātāwaka participants.

While some participants spoke about the smaller alterations that they would like to make to the urban space, other participants noted more ambitious actions for the urban spaces. One participants stated that they would like to see the redevelopment of community spaces to enable shared knowledge and practice to be undertaken on a community-wide scale (*Table 6.8*). Such spaces would foster a mutual care for the well-being of the environment and people, but also allow better understanding of the local histories and spaces of importance of local hapū. The importance of self-determination within the urban space was also discussed by participants. Participants shared that they would like to move away from relying on big businesses for their own sustenance and move more towards being self-sufficient in the urban space (*Table 6.8*). Participant's perspective of self-determination incorporated the idea of community to ensure the flourishment of all people's well-being. This form of self-determination would put responsibility back on the community to provide for their own well-being enabling decision making that encompasses ideas of whanaungatanga, manaakitanga and rangatiratanga.

6.6 Discussion

This chapter explored how people and culture may influence kaitiakitanga practices in urban spaces. The data presented in this chapter has addressed two key aims which were to:

1. Evaluate the relationships between demographic aspects and kaitiakitanga knowledge; and
2. Understand how the role of hapū may influence kaitiakitanga practices in urban spaces.

The key findings of this chapter reports that age plays a significant role in how practices of kaitiakitanga are undertaken (see section 6.6.1). In addition, kinship relationships and engagement with local hapū also has some influence on kaitiakitanga in urban spaces (see sections 6.6.2 and 6.6.3). In addition, there are emerging challenges that participants across all three data sets have highlighted as impacting their practices of kaitiakitanga.

6.6.1 Age and Kaitiakitanga

The differences in age did not hinder participants understanding of kaitiakitanga or the level in which they discussed this concept. However, age did impact how the practice was undertaken by participants. Age is an important factor in determining social change amongst people, as it indicates a person's movement through time and potentially, their experiences of the world (Scherger, 2009). The data indicates that age groups between 26-34 have more ability to undertake physical activities related to kaitiakitanga. This was further evident in the focus groups where age hindered the types of practices that older participants could undertake because of health issues. For younger participants of the focus groups aged between 26-34,

engagement with kaitiakitanga practices were relatively easy, particularly practices related to environmental sustainability. Previous studies have shown the value of early nature connections in encouraging positive environmental practices (Hand et al., 2018; Otto & Pensini, 2017; Rosa, Profice & Collado, 2018) which was evident in participants discussions about their childhood. Moreover these studies have indicated that early exposure is integral to lifelong care of nature (Rosa, Profice & Collado, 2018). This research has expressed that although we may develop strong connections to nature at an early age, changing lifestyles and the process of aging can challenge such practices especially, in urban areas. It further highlights the important role of ensuring nature is accessible and that areas within urban spaces can encourage practices with nature across all age groups.

6.6.2 Kinship Relationships

The concept of protecting precious resources available to the participants was instilled into participants as young people by allowing them to explore nature with an adult and learn about kaitiakitanga through practices with nature. These experiences gave the participants the opportunity to quiz their elders about the practices they were undertaking and to further understand why such engagement with the environment was important. This has subsequently shaped how participants understand kaitiakitanga and their relationship to the environment. Kinship relationships with nature are important in supporting indigenous practices with nature and the knowledge systems that stem from such relationships (Fitzgerald, 2015; Graham, 1999; McNab, 2009; Oliveira, 2014). The data from participants demonstrates the holistic ways in which kaitiakitanga is understood but also how relationships with nature inform these understandings. Kaitiakitanga was not only related to ideas of care and protection but was also reliant on the role of

relationship building and maintenance in the participants application of the concept. The concept incorporated childhood memories as well as traditional knowledge and was used to enable the participants to mediate new relationships in the urban space. More importantly, engagement with people also helped to grow the participants relationship with nature and inform their kaitiakitanga practices. Whakapapa is a key guiding tool in creating and maintaining these types of relationship (Mikaere, 2011; Mutu, 2010; Roberts, 2013) and was evident in the participants discussions about their obligations to nature. A key understanding that was shared through the participants data, was the inherent responsibility of each individual to their natural world and all those who live within it. Although participants highlight the stewardship associated to kaitiakitanga, there was a clear relationships between participants comments and the literature that kaitiakitanga was more than stewardship (see Kawharu, 2000; Mutu, 2010). This aspect as shared by the participants, encompassed the responsibility to both the physical and spiritual well-being of both people and the natural world. Moreover, participants shared some aspects of spiritual connection to nature which is shared by Kawharu (2000) as an important aspect in supporting Māori connection to nature. Kawharu (2000) further highlights the spiritual connections with nature is often created to recognising the strong ties to spiritual beings. Although some discussions were shared about spiritual beings within nature, this aspect was limited across discussions related to urban kaitiakitanga practices. This could highlight a potential risk to recognising traditional spiritual kaitiaki in urban spaces.

6.6.3 Hapū

The awareness by participants of the local hapū in their area was also discussed as well as the level of engagement that participants undertook with these hapū. There

was a developing narrative of participants who lived away from their own tribes and were seeking engagement with local hapū. There was also a portion of participants who identified as being part of the local hapū. With many Māori maintaining relationships to their own hapū (Williams, 2015), it is not uncommon for Māori to seek out similar relationships with other hapū in new spaces. The recognition of participants own genealogical links ensured that cultural practices by participants factor in the role of local hapū of urban spaces. Participants highlighted key communal behaviours like spaces for cultural practices to be important in their rationale to engage with local hapū. The data seems to indicate that participants actively seek out spaces and practices of cultural significance to establish a sense of community connection within urban spaces. This has been discussed in relation to community gardens that provide connection to cultural knowledge and opportunities to share practices with other urban peoples (Ghose & Pettygrove, 2014), which participants highlighted as an aspect that they would like to see in their urban space. Spaces for communal gatherings and the sharing of cultural knowledge and practice can encourage ideas of care and protection through a cultural lens which may help to foster practices that enhance the well-being of both practitioner and resource.

Although participants brought their own experiences, practices and knowledges of kaitiakitanga to the urban space, these aspects were still altered to suit the new urban areas where they reside. The adaptation of these aspects was informed by challenges experienced in urban spaces and the need to respect local hapū mana. Adaptation of practice in urban spaces can be driven by both social and economic factors (King et al., 2018). Different peoples will have their own rationale for undertaking their form of practice like kaitiakitanga (Rosa, Profice & Collado, 2018). The

participants of this research project have demonstrated that cultural aspects like the mana held by local hapū may also alter and force adaptation of cultural practices in urban spaces.

The understanding of kaitiakitanga by participants shows an awareness of whakapapa, mana and rangatiratanga and how these can be manifested through kaitiakitanga by both Mana Whenua and Mātāwaka. Inherent in all three data sets were similarities in how kaitiakitanga was interpreted. There were commonalities shared by both Mana Whenua and Mātāwaka about kaitiakitanga encapsulating ideas of Māori gods, spirituality, the physical environment, intergenerational responsibility and care of nature, care and protection of people, care and protection of cultural knowledge and practice as well as the sharing of knowledge between generations. These similarities assert that both people and culture must be included in the articulation of kaitiakitanga to ensure our actions to care for nature align with local peoples, customs and histories. Similar to the discussion in previous chapters, some participants undertook dual practices of kaitiakitanga, where they used generalised actions of kaitiakitanga in Kirikiriroa, while maintaining a more in-depth practice in their childhood homelands. This ensured that their practice of kaitiakitanga could still allow a form of connection to be established in their new homes that captures the unique place knowledges of the urban space.

6.6.4 Knowledge Transmission

Understandings of kaitiakitanga were further explored in how the participants learnt about the practice, and there was a large emphasis on the importance of both knowledge and practice in kaitiakitanga teachings. People are integral to the maintenance of practice, the development of cultural knowledge and the sharing of knowledge between generations (Grau & Aide, 2007; Mutu, 2010; Walker, 2016).

This is further expressed in the acknowledgement by participants about the interconnectedness of kinship, spirituality and narratives in the expression and understanding of kaitiakitanga and their role in transmitting this to new generations of their families. The transmission of this knowledge to participants can be achieved more easily when they are located in their homelands or amongst their own whānau and hapū. However, this may become more challenging as modes for knowledge transmission become limited in urban places where participants reside. Emery and Hurley (2016) share the need to include cultural mechanisms within urban spaces to support the transmission of knowledge between people. This idea is also expressed as an important consideration for kaitiakitanga practices in urban spaces. The role of people in kaitiakitanga understandings and practices highlights an important need for the transmission of this knowledge. With limited areas of nature in urban spaces, embedding kaitiakitanga into place and nature is difficult in urban spaces, particularly for Mātāwaka. Building more connected communities could support the transmission of knowledges from other tribal groups but also the local knowledge's of hapū. Furthermore, there is a growing interest by non-Māori about kaitiakitanga knowledge and practice and this could further support transmission of knowledge within urban areas. This not only supports the need for practice, but also in encouraging generations of whānau to become more involved in kaitiakitanga practices in urban spaces.

6.6.5 Challenges for Kaitiakitanga

There were multiple challenges shared by participants that affect how and when kaitiakitanga is undertaken in urban Kirikiriroa. However, the data shows that such challenges are only temporary and can be managed to ensure the participants practice of kaitiakitanga is carried out. A lack of knowledge by not only participants

but also other cultures was evident in the participants discussions. Given that most participants were of Mātāwaka descent, there is potential pressure to local hapū forms of kaitiakitanga over their traditional lands and resources. This risk has been experienced where Mana Whenua and Mātāwaka face challenges in being recognised in relation to resource use and management in Aotearoa (Tawhai, 2010). This raises the need for Mātāwaka to create strong connections with local hapū to ensure practices of kaitiakitanga support the objectives of local hapū. More importantly, as more Mātāwaka move to new tribal spaces, the use of generalised practices could harm local knowledges and expression of local hapū kaitiakitanga. This further purports the integral role of capturing diverse expressions of kaitiakitanga to ensure practices are not homogenised into sustainability practices alone. Such practices must also factor the local knowledges of hapū and the ways this knowledge and the hapū themselves can support kaitiakitanga by Mātāwaka (Walker et al., 2019).

The establishment of relationships between Mana Whenua and Mātāwaka are evident in participants discussions as most Mātāwaka participants were trying to establish some form of relationship with local hapū. The data determines that those who reside within urban spaces are aware of their local hapū and in some cases make efforts to engage with these groups. This engagement could potentially influence how the participants undertake kaitiakitanga. As with the varying interpretations of kaitiakitanga, there are growing challenges to undertaking this practice in urban spaces. This poses risk to not only the longevity of participants knowledge in urban spaces but also the protection of local hapū knowledge and sites of significance in urban areas.

6.6.6 Self-determination

Although participants did not explicitly state the word self-determination, this aspect was visible in how participants undertook their kaitiakitanga practices. Choices to access foods in nature and harvest freely were areas that participants highlighted as important to their practices of kaitiakitanga. This included access to their own gardens and imparting knowledge to their peers, whānau and hapū. Protecting this aspect of self-determination was of high importance for those practicing kaitiakitanga. Ghose and Pettygrove (2014) share how practices with nature can encourage self-determination by migrating peoples as practices like gardening provide opportunity for urban dwellers to become self-sufficient. This need for self-determination was further evident in discussions by participants of this study. The level of connectedness that participants felt they held to the environment supported this aspect of self-determination, as the more connected the individual was to place, the more they felt they could express their practice of kaitiakitanga. The lack of support in areas that would support self-determination such as better economic development of green business was also discussed by the participants as needed within urban areas. This area of self-determination requires more exploration, in this study, it illustrates how kaitiakitanga supports engagement with resources and opportunities to create mana enhancing opportunities for both migrant and local peoples. This also challenges us to think about how, when located in other tribal areas, we can actively practice kaitiakitanga but also be respectful in this process.

Limited options for self-determining actions of participants further restricted how and when they accessed resources and nature. It also impeded on their own independence as in later years they became more reliant on others to access

resources. Expressing self-determination within urban spaces is a struggle for many Indigenous people globally, and there is a need to ensure that Indigenous peoples are not only reflected in urban spaces, but that they can also share in the shaping of such spaces (Nejad, Walker & Newhouse, 2020; Tomiak, 2017). The participants of this study highlight that this idea is true particularly in opportunities to connect and engage with nature. Supporting opportunities for participants to explore the natural world more freely would encourage participants to be more self-determining and to reclaim and maintain their practices of kaitiakitanga. What the data does tell us, is that there is potential to support the self-determination of both Mana Whenua and Mātāwaka in urban spaces by providing areas for the practice of kaitiakitanga. This may include spaces that allow Mātāwaka, with the support of Mana Whenua, to shape in accordance with their understanding of kaitiakitanga. Giving some responsibilities to Mātāwaka for their new spaces may also support their needs for kaitiakitanga and support opportunities to create a sense of place. Enhancing access to resources or creating communal spaces to support this would encourage more expression and practice of kaitiakitanga.

The participants data in this chapter has expressed common themes about how kaitiakitanga was perceived by the participants which intertwine aspects of nature, place, people, culture, and accessibility. These themes ultimately guided the behaviours of the participants to undertake varying forms of kaitiakitanga in Kirikiriroa. The participants shared how their understandings of kaitiakitanga can develop outside of their tribal territories. For many of the participants this dual application of kaitiakitanga was highly influenced by the people they associated with and the places they reside in. The influence of local hapū meant that kaitiakitanga practices by Mātāwaka would be altered to a general environmental

practice such as gardening and recycling. Connection to people of local hapū also ensured that participants were respectful of local places and their historical significance to hapū. The role of people in kaitiakitanga practices ensures that appropriate behaviour is undertaken in the urban space. The data has shown that both people and culture provide ways to influence how we undertake kaitiakitanga, but also what considerations we need to make in order to ensure our practices are respectful of the places we might call home.

6.7 Conclusion

This chapter shows the influence of people and culture on kaitiakitanga in urban Kirikiriroa. There is a developing dual application of kaitiakitanga that is highly influenced by the awareness by participants of local hapū and peoples. The chapter has shown the integral role that communities play in how we make sense of our new locations and ways to carry out cultural practices. Chapter 7 brings these ideas, trends and emerging themes found within the data chapters together to show the underlying drivers of kaitiakitanga practices in urban spaces and presents the key findings of this research project.

Chapter 7 - Discussion

"The diversity of life is embellished in this worldview through the interrelationship of all living things as dependent on each other, and Māori seek to understand the total system and not just parts of it." (Harmsworth & Awatere, 2013, p.274)

7.1 Introduction

Urban spaces are complex sites in which people from varying tribes, ethnicities and backgrounds reside, where undertaking cultural practices can often be challenged by new ways of living, particularly for Indigenous peoples like Māori (Haami, 2018; King et al., 2018; Tapsell, 2014). The following chapter brings together the emerging themes and ideas that have surfaced in previous chapters about kaitiakitanga in the urban space of Kirikiriroa. The overall aim of this thesis answers the main research questions which are:

1. How is kaitiakitanga practiced in urban Kirikiriroa?; and
2. How does mana and place influence kaitiakitanga knowledge and its application within the urban space?

For this research project, I used a literature review to understand key gaps in literature pertaining to kaitiakitanga practices in urban spaces. The literature review highlights placemaking, mobility, the urban space, Mātāwaka relationships and the different levels of kaitiakitanga as areas of interest that were explored in this research project. In chapters 4, 5 and 6, I presented the results from data collection methods of this project to understand the value of place to kaitiakitanga practices, the types of resources and practices that participants use for kaitiakitanga practices, and how people and culture are important to kaitiakitanga practices.

This chapter presents a narrative of kaitiakitanga by bringing together the overall findings found in this thesis about kaitiakitanga and the urban space. The findings show how practices are undertaken and how place and mana influence kaitiakitanga practices. Through examining these findings I present a discussion about the need to further contribute to kaitiakitanga practices in urban spaces.

7.2 Making Sense of Kaitiakitanga in Urban Spaces

For this section of the chapter, I draw on the concept of whakapapa to make sense of experiences and ideas shared by the participants of this research project about kaitiakitanga in the urban space and how these are interrelated and dependent upon each other. Whakapapa provides an order to lineage by positioning generations of people in relation to each other and further shows the connections that may stem from a primordial ancestor (Forster, 2019; Mikaere, 2011; Walker, 1990). The tracing of whakapapa allows the user to understand the interconnectedness of people to each other but also people to nature, place, and resources (Forster, 2019; Mikaere, 2011; Rameka, 2017; Roberts, 2013). Moreover, whakapapa provides a structure to lineage whilst also conveying the roles of obligations inherent within genealogy. Whakapapa allows this chapter to illustrate the interconnectedness of themes and the lineage that exist between kaitiakitanga knowledge of both Mana Whenua and Mātāwaka participants while also expressing inherent responsibilities that may adapt in urban spaces. This is done firstly through understanding the drivers of participants kaitiakitanga practices.

7.3 Drivers of Kaitiakitanga Practice

Drivers behind engagement with nature provide further opportunity to understand details about how such connections between people and nature are created (Cheng & Monroe, 2012). Different mechanisms have been used to understand

connectedness to nature and the factors leading to these relationships like frequent exposure, early exposure and direct contact with nature (Otto & Pensini, 2017; Pensini, Horn, & Caltabiano, 2016). This study has displayed similar tends related to key drivers of kaitiakitanga practices. These drivers ranged from physical and non-physical drivers and included both modern and traditional reasonings. Evident in each data chapter were key ideas in participants discussions about kaitiakitanga that range from relationships between whānau, hapū and iwi to relationships with different animals and nature forms like trees. These relationships further presented themselves in participants data and are listed as cultural knowledge and place, relationships to people and nature as well as whakapapa.

7.3.1 Cultural Knowledge and Place

Indigenous peoples have used cultural knowledges and practices to make sense of their world and to create strong connections to nature (Hendry, 2005). The protection of cultural knowledge embedded in practice and place were key drivers for kaitiakitanga activities by the participants. Locale is an important aspect in shaping practices with nature and the knowledges we use to inform such practices (Ellen, 2016), this was further seen in discussions by participants about childhood memories and experiences of place. Using these aspects allowed participants to ensure that cultural aspects of their locale were considered in the application of their kaitiakitanga practices.

Culture was recognised as a way to mediate new relationships in urban spaces especially for those of Mātāwaka descent. Urban Māori have been known to draw on cultural knowledges and practices to support their transition into urban areas and connect with other migrant Māori (King et al., 2018; Williams, 2015). Culture is therefore an important aspect of kaitiakitanga practice and understanding, as it

ensures the practices themselves consider both the physical and metaphysical aspects of people and nature.

7.3.2 Relationships to People and Nature

Relationships to people and nature were key drivers for the practice of kaitiakitanga. These relationships exist in both a physical and metaphysical realm which is largely informed by cultural knowledges (Kawharu, 2000; Rameka, 2017; Roberts, 2013). The recognition of these relationships informs how participants engage with new peoples but also with new environments. The data has shown that the relationships we foster in areas meaningful to us will ultimately inform how we engage in new relationships, such as those we forge in urban places. This drives kaitiakitanga practices as our need for nature engagement further encourages engagement with local hapū and their sites of significance, encouraging a form of connection to place in urban spaces. Engagement with local hapū is a valuable approach with regards to resource management of a region (Forster, 2011). This same principle is shared by participants in their engagement with local hapū when connecting with urban nature.

7.3.3 Whakapapa

Whakapapa is a main driver of kaitiakitanga practices that was evident in participants discussions. The research project has shown that the understandings of whakapapa encourage obligation and connection to place and people. It allows practitioners of kaitiakitanga to trace the origins of their practice but more importantly the origins of their knowledge (Mikaere, 2011; Mutu, 2010; Roberts, 2013), which was evident in participants data. The research highlighted the ways that whakapapa was used by the participants to make sense of their environments but also the relationships that they might build in these places. This reliance on

whakapapa further informed how participants navigate the urban space to practice kaitiakitanga and recognised the forms of mana held in this space by local hapū. Whakapapa becomes a guiding principle for kaitiakitanga practice and emphasises the need to create relationships to people, place, cultural knowledge and nature. More importantly, whakapapa allowed understandings of spirituality and connection to foster between participants and their new spaces. Drawing on whakapapa connections to Papatūānuku gave participants guidance on how to care for her as well as general nature in urban spaces and to understand the importance of spiritual aspects like mauri, wairua and mana in their engagement.

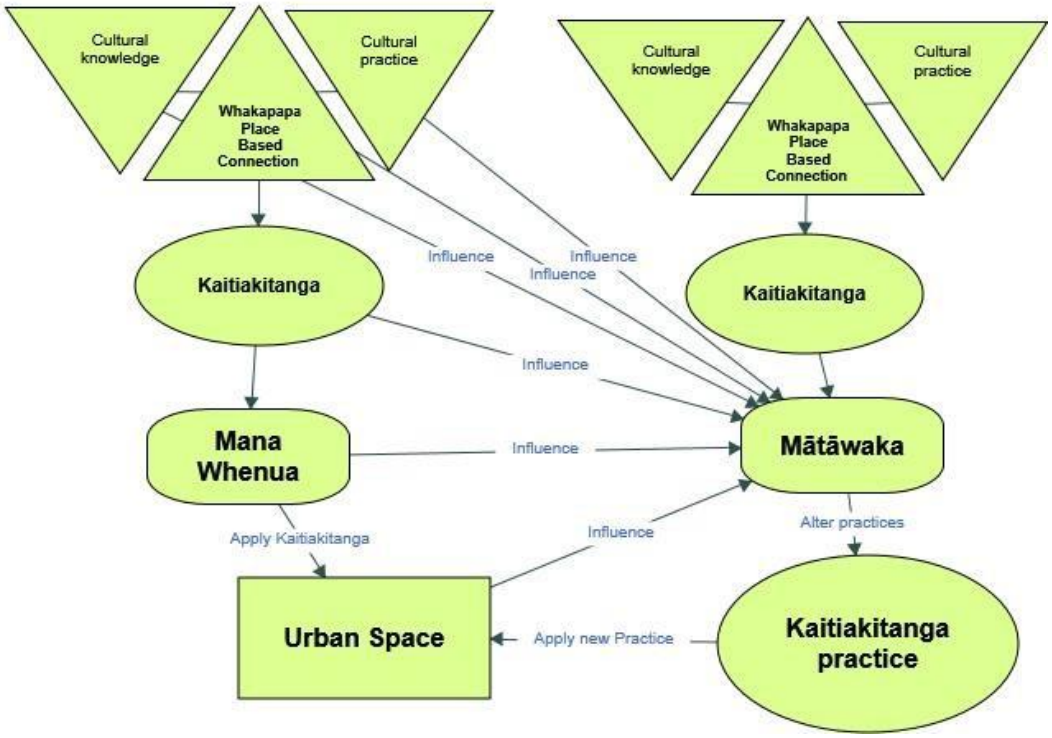


Figure 7.1 - Drivers of kaitiakitanga in urban spaces

Evident within the participants discussions of kaitiakitanga were key drivers that supported kaitiakitanga practices in urban spaces by Mana Whenua and Mātāwaka. In the figure it is clear that Mātāwaka practices are influenced by local hapū knowledges and the urban space itself.

These drivers of kaitiakitanga are then used by both Mana Whenua and Mātāwaka to navigate spaces that are both familiar and unfamiliar. Figure 7.1 presents how

these drivers influence kaitiakitanga practices in urban spaces. For both Mana Whenua and Mātāwaka, cultural knowledge, cultural practices, place and whakapapa inform views of the world and engagement practices with particular spaces. Kaitiakitanga practices stem from these drivers and create ways to care for people and kin of the natural world. When transitioning to urban spaces and applying kaitiakitanga practices, our identities will encompass this transition and become influenced by the spaces we engage with. For Mātāwaka, the cultural knowledge and practices of Mana Whenua and the urban space itself, influenced how Mātāwaka eventually undertook kaitiakitanga in urban spaces (*Figure 7.1*). This process is shown in participants discussions and further highlights that kaitiakitanga practices can differ but may also be informed and driven by similarities in experience and knowledge.

The participants of this study have highlighted a layered approach in the application of kaitiakitanga. Forster (2019) shares how responsibilities in regard to environmental management can contain forms of layering, where obligations to nature and people are understood through the impacts of other aspects like colonialism. This process of layering and the impacts of contextual aspects can be used to understand responses from both the Mana Whenua and Mātāwaka participants in their application of kaitiakitanga in urban spaces. Both groups highlight a similar ancestral layer of kaitiakitanga responsibilities to their tribal territories which are passed down through whakapapa.

For Mātāwaka participants, an added urban layer is applied to the expression of kaitiakitanga in urban spaces that factors the ancestral responsibilities of local hapū from urban spaces. This layering supports the responsibilities of both groups but allows continued respectful engagement with nature in urban areas while

encouraging the recognition of ancestral kaitiakitanga responsibilities.

7.4 Kaitiakitanga in Urban Kirikiriroa

The research project has drawn out interesting data from the way in which kaitiakitanga is practiced in the urban space of Kirikiriroa. The emerging themes evident in chapters 4, 5 and 6 assert that a pattern of behaviour related to kaitiakitanga begins in participants childhood and their exposure to cultural narratives. The cultural knowledge and narrative of Ranginui and Papatūānuku is positioned as the beginning of kaitiakitanga practices by participants. This narrative is important as it establishes the first connections to nature within a Māori context (Ka'ai & Higgins, 2004; Roberts, 2013; Walker, 1990). The recognition of these gods and their narratives were apparent in all three data collection methods as a valuable mechanism for creating relationships to nature as well as being an important aspect for understanding the concept of kaitiakitanga. From this narrative more instances emerge with the creation of the first human and subsequently the migration of Māori to Aotearoa.

Knowledge pertaining to these cultural narratives are often embedded into landscapes, forest, rivers, and waterscapes (Johnson, 2013; Sherman et al., 2016, Wildcat, 2009). These narratives provide a way for participants and their surrounding environments to flourish through practices such as harvesting, resource gathering, cultural practices like karakia, whaikōrero and the maintenance of marae, urupā and connection to physical landscapes like mountains, rivers and forest. Such practices incorporate daily activities and seasonal practices that participants undertake to connect with their environment, culture, and tribal people (Mutu, 2010; Roberts, 2013). These learnings within home environments shape understandings of nature, people, and culture and subsequently, these are the

learnings that are taken with the participants into the urban space. The strong connections established to nature are vital for the longevity of pro-environmental behaviours (Hand et al., 2018; Soga & Gaston, 2016) and is evident in the transition of kaitiakitanga knowledge and practice into urban spaces.

This relationship to nature through cultural practices and the expression of kaitiakitanga then undergoes changes in urban spaces. This change in practice is influenced by different aspects such as recognising the mana of local hapū, relationships to people, mobility, the urban space itself, access to resources, urban space challenges and changes in cultural norms. Adaptation of cultural practices is common for indigenous communities who transition to urban spaces (King et al., 2018; Rangiheuea, 2011; Williams, 2015). However, to understand how and why this change occurs, we must view kaitiakitanga through the lenses of Mana Whenua and Mātāwaka. Both groups share similar principles of kaitiakitanga that are used to guide their application of kaitiakitanga practices, however, given their different relationships to urban spaces, the kaitiakitanga practices are expressed differently.

7.4.1 Mana Whenua and Mātāwaka

The Mana Whenua participants shared ancestry to the local hapū both in and around the Kirikiriroa area. The relationship of Mana Whenua participants to the urban space intertwines ideas of whakapapa and mana. This lineage to the urban space is not one solely related to migration but draws on ideas of occupation and mana (Bargh, 2016). Because of this, Mana Whenua have a stronger whakapapa connection and drive to care for their urban space in comparison to those of Mātāwaka descent. The relationship that Mana Whenua participants share to the urban space also factors intergenerational knowledges about how the urban space came to exist. For the hapū of the Kirikiriroa area, the Kirikiriroa city itself has been

part of contentious engagement between Māori and non-Māori through events such as the raupatu of the Waikato lands and waters (see Te Aho, 2011). These events have subsequently meant that engagement with and in the urban space has been undertaken in a way to reclaim and reinvigorate the occupation of Mana Whenua in these spaces especially with resources like the Waikato river (Te Aho, 2009). The expression of kaitiakitanga by Mana Whenua participants intertwines these aspects to protect local waterways, local pā sites, resources and the knowledges about these areas. Therefore, it is not uncommon for practices of kaitiakitanga by Mana Whenua to be expressed through physical maintenance of the lands and water but also through policy, educational opportunities and activities that increase the well-being of people as seen through participants discussions.

Engagement with nature in the urban space was also shaped by how local hapū resources informed the cultural narratives and identity of Mana Whenua. Nature in this sense, was part of the hapū identity and the narratives used for this area were ways the local hapū either explained this relationship or reminisced about previous generations deeds, particularly narratives of the Waikato river. Because nature was intertwined into all aspects of the Mana Whenua participants lives, engagement was not limited to physical contact but was also engagement with metaphysical aspects like mauri and wairua. In addition, nature often initiated projects as Mana Whenua participants shared co-governance relationships with local government bodies over resources such as the Waikato river. The opportunity to work together to protect and care for nature whilst ensuring cultural aspects are included in this process shows how nature initiates relationships with Māori, non-Māori as well as Mana Whenua and Mātāwaka.

Mātāwaka share a different relationship to urban environments that is founded on

not only their migration from other regions (Ryks, Simmonds & Whitehead, 2019), but also on the length of time they have spent in the urban space of Kirikiriroa. Kaitiakitanga practices by Mātāwaka undergo changes in the urban space to allow the continued understandings of kaitiakitanga from their home regions whilst developing a new relationship to kaitiakitanga knowledges and practices in urban Kirikiriroa. Kaitiakitanga practices of Mātāwaka are expressed in generic ways and are practiced in safe confined spaces. These practices were more steered towards environmental protection and maintaining some form of spiritual connection to nature.

As with these general practices, Mātāwaka were also aware of local hapū of the urban space which influenced the rationale for some of their generic kaitiakitanga practices but also in the collection of resources like medicinal plants.

Similar to Mana Whenua participants, Mātāwaka also mentioned key aspects of kaitiakitanga that guide their actions in the urban space. Mātāwaka used aspects of kaitiakitanga from their homelands to guide respectful relationships with the Kirikiriroa urban space when practicing kaitiakitanga. Engagement with nature by Mātāwaka entailed learning about local hapū and narratives to inform the best ways to express kaitiakitanga in urban areas. This expression intertwined two separate tribal knowledge systems to recognise the origins and current location of the Mātāwaka participants.

7.4.1.1 Relationship Between Mana Whenua and Mātāwaka

Relationships between Mana Whenua and Mātāwaka were established and maintained in different ways in Kirikiriroa. What is important to note here is that these types of relationships were not forced but actively encouraged in order for Mātāwaka participants to learn about their surrounding urban environment. These

relationships were often founded through personal and working relationships with hapū. Such relationships were also strengthened through the shared and mutual respect towards nature and culture. Understanding the different ways Mātāwaka and Mana Whenua connect to nature in the urban space could be enhanced by using core principles to create and shape how urban spaces are designed, especially places with high nature density. Highlighting key resources that both Mana Whenua and Mātāwaka use like kawakawa for cultural and personal well-being has the potential to ensure the urban space provides a way for easy engagement and the development of communal cultural practices.

Research has shown that opportunities for migrant peoples to share cultural practices and understandings of resources in urban spaces not only supports their well-being but also the longevity of cultural knowledges in urban spaces (Foo, 2016; Ghose & Pettygrove, 2014; Soga & Gaston, 2016). These opportunities can allow for more appreciation of the new spaces and resources but also the recognition of local hapū in the application of kaitiakitanga.

7.4.2 Describing Kaitiakitanga in Kirikiriroa

Figure 7.2 - Describing kaitiakitanga

This image shows the ten words used to describe understandings of kaitiakitanga. The frequently mentioned words highlight the need for practices with nature to support kaitiakitanga.

Ways in which participants verbalise relationships to nature, people and place are also important considerations in understanding kaitiakitanga practice in Kirikiriroa. Figure 7.2 highlights the top ten words that were frequently mentioned by participants about their kaitiakitanga practices. The term kaitiakitanga was frequently mentioned due to the focus of the research project, other key words show potential in how to engage practices of kaitiakitanga in the urban space. Highlighted in these 10 words is the large focus on nature but also a focus on people and whānau (*Figure 7.2*). This was strongly expressed as a key aspect in kaitiakitanga practices by the participants. What is also highlighted in this image is the focus on actions and practice related to nature and people. Soga et al. (2016) shares the different mechanisms to support connections to nature such as books and education programmes. Highlighted in these descriptions by participants of this study is the integral role of connecting people directly to nature through kaitiakitanga (Rosa, Profice & Collado, 2018). These key terms indicate an action-based approach of kaitiakitanga taking place in the urban space that incorporates knowledge of nature, people and culture.

7.4.3 Urban Environment

Within the urban space there are key aspects that enabled both Mana Whenua and Mātāwaka participants practice of kaitiakitanga like connections to homelands and communities, access to resources, cultural knowledge and mobility. It is clear that there are multiple ways to grow the understanding and practice of kaitiakitanga and that this needs to be initiated at a young age. The urban space has become a new environment in which the participants learn to navigate and delve deeper into their own understandings of kaitiakitanga. The practice of kaitiakitanga by participants also highlights the changing view of environments and the way we might engage with these diverse settings. The idea of environments has surfaced through the data showing that participants were aware of their changing environments and so adapted their practices, particularly those of Mātāwaka descent. This indicates that the participants have a specific way of practicing kaitiakitanga that is unique to the urban space. More usual practices of kaitiakitanga have been in explored in relation to nature like tribal natural resources (see Henwood & Henwood, 2011; Selby & Moore, 2010). But the urban space has shown adaptive practices by both Mana Whenua and Mātāwaka to suit the urban space itself.

The way in which environments affect our practices also alludes to the idea that our knowledge of how environments work and sustain themselves could also support how best to care and assert kaitiakitanga practices. For the urban space, the identification of important resources, places of significance, historic narratives can be used to help support local hapū whose capacity to care for the entire urban space may be limited (Forster, 2011). This presents an opportunity for Mātāwaka to align kaitiakitanga practices to support Mana Whenua in the protection and care of the urban space we call home.

7.5 New Findings

The new findings found in this thesis have enabled the practice of kaitiakitanga in urban spaces by both Mana Whenua and Mātāwaka. Considering these aspects in kaitiakitanga practices of the urban space shows the potential ways to support the practice by both Mana Whenua and Mātāwaka.

7.5.1 Childhood Exposure

There was a large portion of the participants who shared childhood memories and practices that informed and supported their practices of kaitiakitanga. These memories and practices were extremely important for the participants as it ensured continued practices of kaitiakitanga in new places outside of their childhood homes and regions. Previous studies have highlighted the value of early exposure to nature in creating pro-environmental behaviour and the links to continued practice in adulthood (Hand et al., 2018; Otto & Pensini, 2017; Pensini & Caltabiano, 2016; Rosa, Profice & Collado, 2018). The data in this study highlights the relationship between early exposure to nature and cultural knowledges that enabled better connection to practices such as kaitiakitanga but also that early exposure to practices related to nature ensured stronger connection to those childhood places where the participants once resided. What was particularly important about these memories was the constant exposure that participants had and maintained with nature from a young age and how this impacted their current relationships to nature. These practices would entail exposure to certain plants, wildlife and landscapes, which were prominent memories the participants held. It was through establishing a connection to these plants, wildlife species and landscapes that allowed the participants to grow specific practices related to these aspects. This emphasised the importance of these specific resources for building knowledge of nature and

connection towards the natural environment. Pensini and Caltabiano (2016) share similarities in their finding about early nature exposure where childhood nature exposure supported more affinity and levels of care for nature in adulthood. However, this study on kaitiakitanga highlights how cultural practices can be used to help increase nature exposure and the need to care for nature in adulthood through cultural knowledge and practice.

Because of these early opportunities to connect with nature, the participants were able to create practices that enabled this connection in the urban space of Kirikiriroa. The participant's data has shown that relationships exist between how strong our childhood memories were of practices in our childhood places and the likelihood of maintaining these practices and connections to place in our adult life. More interestingly, there were memories expressed by the participants about the role of their marae and kin spaces in supporting the opportunity to be exposed to kaitiakitanga knowledges and practice. Although marae connections were expressed by participants who migrated from rural areas, it further shows how cultural spaces can support the flourishment of our practices with nature. The role of our childhood memories of place, culture and nature becomes an important component for carrying out kaitiakitanga practices but to also guide us in appropriate practices for new spaces. It further provides a foundation to build new practices for connecting to people, place and nature. Although literature currently exist about the need for early exposure to nature in urban spaces for children and the consequential feedback loops that stem from this exposure (see Hand et al., 2018; Soga & Gaston, 2016), this finding about childhood exposure for kaitiakitanga practices asserts the value of cultural knowledge, spaces and practices in supporting such exposure and the longevity of nature connections and care. The

finding further highlights the value of immersing future generations in cultural practices with nature to create and support their future relationships with the natural world.

7.5.2 Nature, Culture and the Use of Practice

Nature was an important aspect that was frequently mentioned throughout the data chapters. This finding was expected in the research as much of the current academic discussions pertaining to kaitiakitanga are largely nature and socially centred (see Kawharu, 2000; Marsden & Henare, 1992; Mutu, 2010; Roberts, 2013; Selby & Moore, 2010). Kawharu (2000) captures this sentiment in the following quote:

> *Kaitiakitanga* embraces social and environmental dimensions. Human, material and non-material elements are all to be kept in balance. Current use of *kaitiakitanga* has tended to emphasise conservation and protection. (p.349)

Nature for the participants was expressed differently through both a physical and intrinsic understanding. For this reason, nature in this instance intertwines culturally significant narratives and practices. Participants noted that nature included common aspects such as trees, landscapes and waterbodies but they were also intertwined with aspects related to Māori gods and the participants ancestors. For this reason, nature was not explicitly discussed as a single aspect but was seen as a holistic space of connection between the participants and the spiritual and physical components of Te Ao Māori. Nature was not limited to ecological functions of the environment but also included the role of people in the functions of such eco-systems. Calls to recognise this relationships between people and nature have been echoed through indigenous stories (Berkes, 2012; Turner, 2005). It is no surprise that for participants of this research the same sentiment was repeated. All kaitiakitanga practices undertaken by participants encompassed the need to care and protect what

they view as valuable, particularly in nature. As most participants connection to nature was undertaken through applying a specific practice to a species or place, this sense of connection would alter as those previous relationships did not exist in urban spaces for some participants.

This relationship to nature in urban spaces was not as intimate as the relationships that participants held in their childhood areas. To understand this idea further, participants of Mātāwaka descent would only undertake a general practice of kaitiakitanga and other cultural practices in the urban spaces. In comparison to childhood places, participants were able to freely explore their ngahere and moana and actively harvest resources from these areas. Furthermore, Mātāwaka participants were often involved in key decision-making processes for their childhood areas.

In the urban space nature was seen in a way that provided the participants with an appreciation of their childhood resources so was used as a reminder of their practices from their homelands. This would often require the participants to follow a fundamental principle of engagement with nature and alter their practices to suit urban areas, but also to become aware of local hapū narratives. What is also highlighted by participants was the development of spiritual relationships to nature as they aged. Although participants engaged with nature at a young age, the development of their understanding about spiritual relationships to nature was fostered as they aged. This relationship was made more prominent as they moved into new spaces where such spiritual connections may have been limited. This finding about spirituality was unexpected, and further challenges the notion about kaitiakitanga and its dominant use in physical resource management. It further highlights the importance of spirituality in kaitiakitanga and the integral role of the

Māori spiritual realm in shaping and guiding kaitiakitanga practices (Kawharu, 2000; Lockhart, Houkamau, Sibley & Osborne, 2019; Marsden & Henare, 1992).

There were different ways that participants create and maintain relationships to nature in urban areas. Participants engaged in gardening practices whilst others discussed their relationship with local waterbodies through swimming and kayaking. Other participants used karakia and poetry to engage with nature while some actively sought out local resources for rongoā. The data by participants shows a deliberate action to ensure that their connection with nature continues in both a work and home capacity. Where appropriate, participants were actively seeking out ways to ensure their connection to nature continued. This varied from including nature projects in their work or seeking out historic narratives about their area to help inform the best engagement approach for the place that they reside. The participants have reported that this connection is highly influenced by cultural grounding. Therefore, nature relationships through kaitiakitanga rely heavily on cultural knowledge to flourish in urban spaces.

The diversity in kaitiakitanga practices was a new finding for this research project. Although a large portion of practices were related to physical resource use which was expected, these practices were undertaken in both traditional and modern ways to suit the needs of participants. Adaptation of knowledge and practices by Māori in urban spaces has been shared by Williams (2015), Rangiheuea (2011) and King et al. (2018), but the adaptation of kaitiakitanga has been rarely shared in relation to mana and place. The findings indicate that kaitiakitanga can be adapted to suit modern conditions but will ultimately incorporate local cultural knowledge and practices of the spaces we choose to apply kaitiakitanga.

7.5.3 Access to Resources

The ability to access resources was an important area that enabled participants to undertake their kaitiakitanga responsibilities. However, this access to resources was not always available to participants. Therefore, many of those who engaged in the research project became reliant on whānau members near and far, to support the transportation of resources to them. This created in some ways, a translocation of species from one region to another, carrying with it the knowledge and narratives of other regions. It is important to note here, that age was a factor in this limited access to nature. For older participants, their reliance on other whānau members was driven by the limited ability to collect resources. Beyond the influence of age, participants noted limited aspects of nature that surrounded their homes. Because of this limitation, the practices related to kaitiakitanga undertaken by the participants were in the form of general environmental practices such as recycling and gardening. This demonstrates the influence and potential risk to kaitiakitanga practices, especially those related to certain plant species. Limited access could decrease interest and maintenance of practices related to plants, animals, waterways and landscapes if our ability to access these are hindered. Limited access to resources could also lead to an extinction of experience (see Soga & Gaston, 2016 for further explanation). Although this finding was expected as it is largely related to nature in urban spaces, it provides an emerging area of interest about the level of accessibility to nature that is becoming more challenged for facets of urban peoples (Jennings et al., 2012; Somerville & Hickey, 2017). There is a need to ensure that all peoples within urban spaces have opportunities to access nature in close proximity to their homes. The research asserts the need to address the levels of accessibility which may benefit from the narratives shared in this project by Mātāwaka.

7.5.4 Lifestyle

The relationship of participants chosen lifestyles and the opportunity to practice kaitiakitanga were evident in participants data. All participants discussed a desire to practice kaitiakitanga in the urban space but were often hindered by employment commitments. This meant that participants would have to choose between continuous practices of kaitiakitanga and supporting their families. Adaptation of living by Indigenous peoples has been explored in urban spaces with some focus on challenges to food security (Skinner, Pratley & Burnett, 2016), health outcomes (Ryks et al., 2019) as well as nature connections (Mata, Ramalho, Kenned et al., 2020). Evident within these studies is the understanding that urban spaces force a change in our lifestyles that may influence varying pockets of our lives. This research supports such perspectives and highlights the effects that urbanism has played on practices of kaitiakitanga. However, the participants have shown that to overcome such changes, they would include kaitiakitanga aspects in some of their daily routines or in their employment. As previously stated, it is not unfamiliar for participants to alter parts of their kaitiakitanga practice to suit the urban space. This clash between practice and monetary sustainability has meant that participants relationship to kaitiakitanga can often become limited to times when they are home or away from work.

General practices of kaitiakitanga can support both the maintenance of participants lifestyles and cultural practices. As participants continue to reside in the urban space, this relationship to kaitiakitanga is moving more towards cultural connection to nature and place. It could also signal that kaitiakitanga in urban spaces requires larger commitments to fully express this practice in urban spaces. This new finding about lifestyle prompts thoughts about how we choose to incorporate cultural

knowledges into urban spaces. Historically, our knowledges were embedded into place and maintained through cultural practice (Mikaere, 2011; Mutu, 2010; Roberts, 2013). This research has shown that this important process has adapted in urban spaces and now relies on home spaces for the appreciation of nature and the cultural practices we use to connect to nature.

Developing this expansive way of practicing kaitiakitanga that consider the lifestyle of the participants, the resources they use, the practices that are important to them, and knowledges they might bring to the urban space are vital to support our placemaking processes. The participants data shows that practices of kaitiakitanga are being altered to suit the urban space which challenges abilities to imbed knowledge into nature.

7.5.5 Waterbodies

There were discussions by participants about the significant role of waterbodies and waterways in how they perceived their relationship to nature and the practice of kaitiakitanga. Previous studies have highlighted the importance of protecting water in many tribes across Aotearoa (see Henwood & Henwood, 2011; Memon & Kirk, 2012; Te Aho, 2009). Within the childhood memories and current experiences of participants, the sea and local rivers were seen as integral to spirituality. These practices with waterbodies would also include narratives about certain water species and areas that played a significant role in the relationship of local hapū with their local waterbodies. It was through these relationships that some participants mentioned their growing understanding of spirituality. Such relationships would include the practice of karakia and the recognition of spiritual kaitiaki of these waterbodies such as taniwha.

The relationship between kaitiakitanga and waterbodies would often mean participants developed a holistic approach to their engagement with water. These practices involved karakia, tohi and singing to contribute mauri to the river. The data did allude to the sanctity of waterbodies in comparison to landscapes and that participants viewed waterbodies as carrying more spiritual meaning. Although, more broadly, this connection to waterbodies may highlight an inherent challenge for kaitiakitanga practices with other forms of nature. It may also show limitations in engagement with diverse nature. A lack of diverse nature could pose risk to spiritual engagement with forest, birdlife, lizards and other species that may often be viewed as kaitiaki.

There were limited discussions about harvesting from waterbodies so the relationship that participants were creating with the Waikato river was one of contribution to its health and well-being in a spiritual sense. This correlates with the idea that participants of Mātāwaka descent were aware of their relationship to the urban place and the need to contribute positively to their new homes. For those of Mana Whenua descendant, they would continue to undertake practices related to the river that had been passed from previous generations such as iriiri, karakia and resource collection.

This finding was unexpected and alludes to the need for further exploration of the value that water holds to spirituality. Māori spirituality and its relationship to water is a growing body of literature as shared through the works of Phillips (2018) who asserts the integral role of wairua and water in increased wellness of Māori communities. In addition, Hopkins (2018) details the intricate relationships of protecting the mauri of Matahuru awa and the ability to express kaitiakitanga. These works present the value of waterbodies to kaitiakitanga and spirituality, however,

this study shows that such relationships can also be established by Mātāwaka in urban spaces. This finding emphasizes the need to ensure that we factor in the changing ways our kaitiakitanga practices might manifest to different parts of urban nature, particularly to support spirituality in urban areas. More broadly, it expresses that modern spaces are unlikely to challenge spiritual connections to nature.

7.5.6 Migration and Mobility

There was a particular focus on the idea of mobility in the participants data that was closely linked to how they undertook kaitiakitanga. When participants were located in their home areas, the collection of resources was much easier as they were familiar with the appropriate harvesting practices, location of resources and hapū protocols. Participants were also aware of the areas in which they had access to harvest resources and therefore, these areas became an essential part of the kaitiakitanga practices of the participants. Since moving to the urban space of Kirikiriroa, participants were experiencing more instances of travel related to kaitiakitanga practices. This form of migration would often entail the participants travelling between Kirikiriroa and their childhood places in order to maintain connection with their own whānau, hapū and iwi. To understand this further, participants noted that they would often commit themselves to projects that were being undertaken in their childhood areas such as restoration of marae, local landscapes as well as contributing to land, whānau and marae trust. Such contributions required the participants to continuously travel between Kirikiriroa and their childhood homes which highlights the important role of mobility in maintaining kaitiakitanga practices and connections to homelands. What is also seen in this mobility pattern is the maintenance of kaitiakitanga through continued engagement with resources in their childhood places. Through their commute,

participants could still maintain intergenerational knowledge about resources as well as use these resources to support their own livelihood even while they reside in urban areas. For those participants that did not travel frequently, such as the kaumātua and kuia of the participants cohort, their resources would often be brought to them. The need to maintain connection to resource, place and people required the participants to ensure they could maintain mobility between the urban space and their childhood areas. This finding about mobility back to home spaces was unanticipated as much of the literature and experiences of urban Māori has largely focussed on migration to urban areas (Haami, 2018; King et al., 2018; Rangiheuea, 2011; Williams, 2015). There is a growing body of literature that shares the process of urban to rural migration (see Stockdale & Catney, 2014), but such migration can be related to age and the context of place. In this study, the urban to rural migration was a continuous pattern of migration that participants experienced, which was largely related to the need for physical and cultural sustenance.

However, within the urban space itself, mobility becomes challenged as participants are less likely to travel away from places of comfort such as their own homes. Participants noted that most of their generic kaitiakitanga practices are undertaken in their homes within the urban space. This has meant that participants would not often travel to undertake kaitiakitanga in the Kirikiriroa city but would remain in safe, near-by areas. There are many reasons for this limited travel such as awareness of hapū protocols, limited knowledge of appropriate areas to practice kaitiakitanga as well as altering kaitiakitanga practices to suit the local resources that participants were using. The limitation in travel related to kaitiakitanga does not however, limit the practice itself. As seen previously, participants were still engaging, where appropriate, with local waterbodies in a respectful and meaningful way. However,

this engagement was also undertaken in a way that required limited harvesting or taking from such water bodies. This finding, although related to migration, provides an unexpected discussion about the relationship between mobility and resource use. Cervero, Guerra and Al (2017) highlight the need for urban spaces to factor not only the movement of people but also to provide better opportunities for all neighbourhoods and urban dwellers to engage with nature. Cervero, Guerra and Al (2017) assert that urban spaces should factor the inequitable access of nature in cities and further support communal hubs where both people and nature can co-exist. This need is further expressed in the findings of the research. Participants show that their migration, although challenged in urban areas, may well be a symptom of limited nature spaces. Supporting the development of accessible nature spaces will not only address mobility issues within urban spaces, but also ensure all urban dwellers have opportunities to explore and connect with nature.

7.5.7 Kinship and Community

The idea of community was also highlighted as a key theme that encouraged the practice of kaitiakitanga but also the opportunity to create sustainable relationships with nature. Participants noted the importance of community in their childhood homes and the ways in which their parents and grandparents would ensure that they maintained this idea of community with other whānau within their hapū. In addition, some participants highlighted that this process of community would be maintained through shared resources between whānau. This would involve harvesting and sharing of resources to ensure the sustainability of the wider community and ensure that the responsibility to care for both the young and old were encouraged in the participants households.

The reliance on both knowledge, practice and community embodies a core rationale for kaitiakitanga practices. These same aspects are what participants seek in urban spaces. In transitioning to new urban spaces, participants would try to seek out connections with communities of the Kirikiriroa area. This finding was expected as the concept of whakapapa was inherent in all three data sets and was strongly associated to the rationale for maintaining kinship relationships. Discussions provided by Williams (2015) further highlights the importance of building communities within urban spaces to ensure the longevity of cultural knowledge but also the maintenance of cultural identity. These experiences share similarities to the needs by participants of this study, to create a sense of place in another tribal boundary.

Participants took part in activities such as kapa haka, school trips and work functions to involve themselves in communal activities within the urban space. These opportunities to connect with communities would provide a way to be involved in local hapū events, learn about local hapū narratives and provide learning opportunities for the participants in a way that allowed them to see sites of significance. The relationships created through these methods show the importance of connecting to people in order to create a connection to place and nature. This highlights a different form of connection in urban spaces that relies on the social interaction rather than nature connection. This finding about human engagement for nature connections has been explored by Bush, Hernandez-Santin and Hes (2020) who contend that engagement with nature is largely driven by community needs and priorities. Where nature is valued, we can expect stronger examples of communities working together to create and maintain the well-being of people and nature (Bush et al., 2020; Ellis, 2019). Moreover, Zhu and Fu (2017) share the

integral role of communal spaces in building stronger communities within urban areas. The emphasis made on the significant role social engagement through communities plays on our nature engagement is seen in the findings of this research project. Furthermore, the urban space does not necessarily limit the exposure and creation of communities but it does change the way in which participants can be supported and encouraged to undertake cultural practices such as kaitiakitanga.

Participants highlighted key areas that they thought would be beneficial to create connection with other urban people such as local parks and community gardens. There was still an emphasis on creating these communal spaces in urban areas however, encouraging the use of such spaces would rely on the level of connection that participants held to that particular project and community. These ideas, if supported and developed appropriately could encourage shared spaces that use kaitiakitanga activities as ways for creating and maintaining connection to place and community. This was also evident in how participants engaged with restoration projects in Kirikiriroa. Although, engagement was relatively low across all three data sets, there was still a willingness by participants to care for nature. The participants further show that the cultural objectives inherent in kaitiakitanga may be key in increasing Māori engagement in restoration projects, particularly for Mātāwaka. Moreover, supporting stronger ideas of community and the recognition of nature's value to Māori could increase engagement in restoration projects (Hall et al., 2021; Walker et al., 2019).

7.5.8 Knowledge and Mana

The idea of mana and how this is both acknowledged and maintained in the urban space contributes to kaitiakitanga practices in the urban space. For some participants, the role of mana played an important part in how they shaped

engagement with local hapū and sites of significance. This would also influence the degree of kaitiakitanga practices that they would undertake in the urban space. There was a strong relationship between knowing about local hapū who held mana over their region and the application of generic practices of kaitiakitanga. Often if Mātāwaka participants were aware of local hapū and had engaged with these hapū on one or more occasions, they would alter their practice to be more generic comparative to kaitiakitanga practices they undertook in their childhood homelands. The recognition of this mana that hapū held ensured respectful and appropriate practices of kaitiakitanga by Mātāwaka. These generic practices were also evident in those who did not engage with local hapū, further showing the importance of mana in providing guidance for Mātāwaka in new tribal areas. This was an important finding in this project as it gives light to an area of urban Māori experiences that has longed called for recognition and examination (see Ryks et al., 2019 and Walker et al., 2019). As more narratives emerge of Mātāwaka, their experiences play an integral role in helping to understand place attachment, cultural knowledge migration and cultural development in urban spaces.

For participants with Mana Whenua connections, the recognition of mana played a part in how they undertook kaitiakitanga. However, they were also aware that they shared the Kirikiriroa area with other hapū and therefore, recognised the boundaries that existed between each of these hapū. Such boundaries did not align with council recognised boundaries, but rather, hapū used local waterways, sites of significance and pā sites to indicate the margins of hapū authority. To ensure respectful approaches, Mana Whenua participants noted that they would recognise the principles of kaitiakitanga in order to make appropriate decisions about resources use in the urban space. This idea was also applied in the way that they would engage

with other hapū and crown entities. In addition to this, there were comments by participants about mana in urban spaces, where hapū may have working relationships with local entities in the management of resources within urban areas and thus share decision making abilities in these processes. This signals a need to ensure that engagement approaches today include the recognition of the role of local hapū in urban space design, resource use and planning. The recognition of local hapū mana should encourage kaitiakitanga practice that align to the respective regions of hapū. The value of mana within urban spaces is a new finding particularly as it relates to Mana Whenua and Mātāwaka relationships through kaitiakitanga.

What this also does is provides an opportunity for Mana Whenua hapū to reclaim their spaces and visualise a way in which to include Mātāwaka culture and practices into the urban space in an appropriate manner. Recognising Indigenous peoples within urban spaces has been echoed through academic writing. Nejad, Walker and Newhouse (2020) share the importance of such inclusion:

> Incorporating indigenous approaches to placemaking, therefore, generates potential for transforming oppressive and privileging social structures. Accomplishing this for contemporary urbanism in settler cities will not be easy and requires an ontological and epistemological transformation in conventional Eurocentric conceptions of placemaking and urban design. (p.440)

The participants of this study share similar ideas to the quote by Nejad, Walker and Newhouse (2020) but display that kaitiakitanga can also be used as a vehicle to transform place attachment and challenge the western dominate ways that urban spaces are constructed.

These findings show a web of experiences that are being undertaken in the urban space. The findings highlight that urban practices of kaitiakitanga are continuing to adapt to changes experienced by the participants of this research. More importantly,

these key themes enable the reader to see that our relationships that we create to people, place, nature and culture are all part of the kaitiakitanga concept. Therefore we should consider these holistic aspects in supporting kaitiakitanga by both Mana Whenua and Mātāwaka in urban spaces like Kirikiriroa. The findings conclude, that kaitiakitanga is being undertaken in urban spaces such as Kirikiriroa. It intertwines and recognises our connection to childhood places and the connections to our new places we call home. Kaitiakitanga in urban Kirikiriroa relies on the support of whānau to maintain traditional knowledges and practices from our childhood places. It further recognises the role of mana in how we undertake practices in urban areas. Practices of kaitiakitanga in urban Kirikiriroa allow for connection to nature to be established through environmental practices like gardening, recycling of rubbish, river walks, kayaking, resource gathering and engagement with some ecological restoration projects. It also includes undertaking cultural practices such as waiata, karakia, tohi, iriiri, rongoā harvesting and protection of sites of significance. These practices enable diverse ways of kaitiakitanga to be carried out in urban Kirikiriroa and support both local and migrating people to connect to urban places. Moreover, the way that kaitiakitanga is undertaken in Kirikiriroa intertwines placemaking through kaitiakitanga practices.

7.6 Extending the Discourse on Kaitiakitanga

This section aims to contribute to the growing discourse on kaitiakitanga. Although this thesis has contributed by way of understanding kaitiakitanga experiences in urban spaces, there is a need to invoke a broader discussion on the concept. Before I begin this discussion, it is important that I acknowledge that there is no succinct definition of kaitiakitanga but rather, academics have sought to capture the diversity of experience from whānau, hapū and iwi (see Selby et al, 2010). Indeed each

individual, hapū and iwi often have their own valued perspective on the concept. I acknowledge that this diversity in experience is formulated with respect to locale, culture, nature and people. Here, I offer discussion about kaitiakitanga that may challenge how we currently perceive this practice, and furthermore, the areas that require increased consideration as we continue to reside in colonial modern environments, we call towns and cities or to many Māori now a place considered home.

Extended residence in urban spaces as a result of urban migration has changed the way we view cultural practice and knowledge (King et al., 2018; Williams, 2015). Our need to adapt to modern spaces is evident in changing knowledges, social norms and behaviours (King et al., 2018; Kulis et al., 2013; Williams, 2015). This body of research has presented how kaitiakitanga practices have adapted and changed as urban peoples continue to reside amongst built environments. This change in practice of kaitiakitanga in a broader sense, however, is not new. Historically, kaitiakitanga was not a practice that was largely applicable to the human realm. As shared by Marsden and Royal (2003), the concept of kaitiakitanga is derived from the role of kaitiaki, which were largely spiritual beings or beings within nature. These spiritual beings acted as guardians of people and embodied the role of care and protection used within the kaitiakitanga concept (Marsden & Royal, 2003; Mutu, 2010). Kaitiaki were also seen as Māori gods, who were active in the protection of their respective realms. Kawharu (2000) shares some insight about these beings:

> In the spiritual realm *kaitiaki* may appear in the form of mythical beings, such as tribal *taniwha*, or ancestral keepers, such as family or tribal gods. Takauere is a well-known *taniwha* of the northern Ngapuhi tribe who resides within the geothermal springs at Ngawha (Waitangi Tribunal

> 1993). A unique double trusteeship or reciprocal relationship exists between Takauere and Ngapuhi, where careful administration of the hot springs by Takauere and the people ensures that Ngapuhi's well-being is protected. Two *taniwha* roam throughout the waters of the Kaipara Harbour and carry out *kaitiaki* duties looking after both Ngati Whatua and the Harbour. Perhaps a better known *kaitiaki* within Ngati Whatua is Tumutumuwhenua. Oral tradition and *whakapapa* tell the story of Tumutumuwhenua being a mythical or spiritual guardian who rose out of the earth and is the ancestor of all Ngati Whatua today. (p.360)

This reciprocal relationship between the spiritual realm and the physical realm relies on the cooperation of kaitiaki of both realms to support each other and protect the mana held within each realm. The spiritual nature of kaitiakitanga is where ideas of whakapapa, mauri and mana originate (Marsden & Henare, 1992). Spirituality and the recognition of mana and mauri were and are integral to interpreting nature signs and messages from the spiritual realm (Roberts et al., 1995). With the increase in environmental degradation, the concept of kaitiakitanga has now been employed by people in the protection of nature (Marsden & Henare, 1992; Roberts et al., 1995). The transition of the 'protector' role from nature to people has meant people now become integral in directing the health and well-being of nature and even some of the beings we once and currently still see as kaitiaki. This has meant that people now apply kaitiakitanga in respect to their understandings of how spiritual beings once did. Current practices draw on roles of historic kaitiaki and imitate their levels of care and protection of our surroundings through kaitiakitanga.

It is not for this discussion to disagree with this transition, but rather, it prompts the need to understand the integral role of spirituality and the historic role of kaitiaki in shaping future use of kaitiakitanga. Moreover, it stimulates conversation about how this practice will be challenged with the changing environmental and social issues

that continue to plague the realm of people. At present, we are experiencing increased environmental degradation, habitat loss and increased climatic events related to climate change (Devore, 2014; Zentner et al., 2019). These issues which are consequences of our human actions, not only harm our way of living, but also damage nature in all its forms (Devore, 2014). Kaitiakitanga practices have been used to restore connection and mauri between people and nature, it may also play an integral role in addressing these new challenges to our ways of living.

This creates room for a deeper discussion about our current understandings of kaitiakitanga and if we as people still use the taiao to direct our actions in this modern age. I pose this question as not to incite discussion about the ineffectiveness of kaitiakitanga as a concept. It is deliberately challenging in the hopes to develop the very body of knowledge that may aid in contributing to increased health and well-being for future generations to come. Importantly, the development of a deeper understanding of kaitiakitanga will only benefit the restoration of nature as society adopts a more developed worldview that derives from understanding natures importance.

Relying on and protecting nature can become complicated when among new tribal lands (Walker et al., 2019) where the recognition of Mana Whenua is important as well as the heterogeneity of urban spaces (Ryks et al., 2019). Discussions captured within this thesis have shown changing practices that generalise relationships to nature because of the recognition of mana held by hapū. These practices are related to the growth in environmental practices that may not stem from cultural knowledge systems. Such practices point to developing knowledges of how to contend with new tribal areas and our need for connecting to nature. Inquiring into the cultural knowledges of local hapū provides opportunity to understand how kaitiaki exist in

these spaces and potentially, where our efforts must be used in undertaking kaitiakitanga.

The research findings have further declared the value and increasing challenges that are faced by the practice of kaitiakitanga in its application for those who choose to practice it in urban environments. Where general practices are applied by Mātāwaka, this could potentially have an opportunity cost of cultural knowledge being depleted in urban spaces as generalised knowledge is used in place of traditional kōrero and tikanga that aligns with the region. With wisdom being synonymous with age, any disconnect between generations further challenges intergenerational knowledge transfer. Although we are continuing to express and share cultural knowledge, the level of knowledge between generations shows we should not be complacent in addressing the issues that challenge and prompt changes in how we practice kaitiakitanga as young, old, urban and rural people.

This research project has allowed many angles of understanding about kaitiakitanga to surface that intertwine cultural knowledge from across Aotearoa. Evident in these perspectives are a universal truth unknowingly shared by the participants. This truth is that nature and people must be viewed synonymously and kaitiakitanga can be used as a vehicle to articulate and support this perspective. Kaitiakitanga largely draws on the recognition of diversity and the messages such diversity brings to our lives, knowledges and practices. In urban spaces this form of diversity in nature can become limited, which is where participants of this study have highlighted as challenging their use of resources. Moreover, limitations in diverse nature experiences can be harmful in the development of knowledge for urban people (Soga & Gaston, 2016; Zhang, Goodale & Chen, 2014).This challenge asserts the need to revisit our historic accounts of kaitiaki and recognise the whakapapa

inherent between people and nature in shaping future use of urban spaces and the application of kaitiakitanga.

A question raised in the research is the movement from the spiritual concept of kaitiaki, being those of the natural world, to the application of sole responsibility falling upon people who implement policies for natures protection and are prone to differences in interpretation and application. Could there be a point where we can transition back to relying on nature as our kaitiaki, being guided by and following the signs and ways provided to us as our ancestors once did? How can we reinvigorate the reo of our tūī, kererū and the like in caring for nature in urban areas? Is this sentiment possible in our current day and age? In our haste to apply the kaitiaki role to ourselves, have we done so in a eurocentric manner and lowered the role of our own kaitiaki in both the physical and spiritual realms? Our tūpuna relied heavily on spiritual beings of nature to guide their behaviours and ensure the world around them was balanced (Kawharu, 2000; Mutu, 2010). Navigating the world around them, our ancestors ensured nature, and our kaitiaki were all factored into the decisions-making processes of our tūpuna. This to me is the essence of kaitiakitanga. It is ensuring that both the physical and spiritual realms are balanced. It is letting nature inform our practices, our way of thinking and our relationships to each other.

As we continue to reside in urban spaces, how can we draw on nature in all its forms to encompass this spiritual relationship that our tūpuna once used? Our ancestors have shown the importance of spirituality for our connections to nature through kaitiakitanga, an ongoing generational question is what legacy will we leave for future generations to navigate their changing world? The research findings lead me to believe, that it is time we re-establish the integral role of spirituality and nature

kaitiaki in urban spaces. Efforts by varying groups have in some parts contributed to this process through the introduction of wildlife sanctuaries, ecological corridors and the establishment of urban forest (Starbridge, 2009; Wallace & Clarkson, 2019). Here, I assert the need for recognition and guidance from these beings in our actions of kaitiakitanga. The research project has reported that spiritual connections are used in urban areas, however, the recognition of kaitiaki of the natural world was limited and this challenge must be addressed. As we continue to build stronger relationships with remnant nature in urban areas, we should not forget the need to restore urban nature species to their homes. Local bird species, invertebrates, lizards and the like must be returned to their home spaces, and their role as kaitiaki reclaimed in urban spaces. The recognition of spiritual kaitiaki and the domains they protect will allow the reciprocal relationships between the spiritual and physical realms to be maintained in todays modern day.

This action pushes back on the idea that urban spaces can only be synonymous with colonial ways of behaving and thinking but further confronts the generalisation of our own practices in our need to 'adapt' to new colonial spaces. Kaitiakitanga must continue to advocate for the expression of cultural practices but also the recognition of the tuakana role of nature. Kaitiakitanga should not only advocate for our own well-being but also the well-being and mana of our taiao. Recognising and addressing this need will not only benefit our current engagement with nature, but further provide future urban dwellers the opportunity to connect with nature through kaitiakitanga like our ancestors once did.

7.7 Conclusion

This chapter has presented the drivers of kaitiakitanga that have influenced how participants express this concept in urban spaces. It has further put forward the key findings of this research project that show the multiple aspects that shape this concept and its application within urban spaces. Moreover, this chapter has expressed the need to reintroduce kaitiaki of nature like those used by our ancestors in urban spaces to support kaitiakitanga practices. The next chapter concludes this thesis and presents the limitations of this research project, areas for future research while also offering key recommendations to support kaitiakitanga in urban spaces.

Chapter 8 - Conclusion

8.1 Reflections of the Research

The journey through this research project on kaitiakitanga in the urban space has been both rewarding and challenging. Like many postgraduate students, the doctoral journey allows us to strengthen our skills of research and contribute new ways of thinking to the academy. Allowing more of our communities' experiences to be recognised for its merits continues the need for indigenous knowledge to shape research and influence a shift within the academy to recognise the role of grass roots communities in knowledge development and maintenance. As outlined in this thesis, often indigenous research begins well-before Indigenous people's step into our academic institutions and for this reason, we should not see this thesis as a complete end to the examination of kaitiakitanga in the urban space. Rather, this section aims to conclude this conversation about this topic and hopes that future researchers will begin their contributions to kaitiakitanga. The journey was not complete without the many challenges that face doctoral students as well as the changing way we engage with our research project. My perspectives of kaitiakitanga have changed through this research journey which is attributed to the knowledge, conversations and learnings shared by the participants of this research project. The kōrero gifted from the participants of the research and the mana of their kōrero must be upheld and thus, was a key driver for completing this body of work. The research journey challenged my own understandings of kaitiakitanga and allowed me to see the many ways that we engage with our environments and the impacts of this relationship on our own well-being. Looking back to where my understandings began to where I currently view kaitiakitanga has

allowed me to see that this development of kaitiakitanga understanding will be ongoing, challenging but will ultimately develop connection to place, people, culture and most importantly, nature. I give my utmost thanks to all participants who have allowed me to push the boundaries of my own knowledge and contribute a new view of kaitiakitanga from an urban perspective. I hope that this research has captured the experiences of the research participants in a way that shows the challenges we might face in urban spaces, but more importantly the strength of indigenous practice and knowledge in supporting us through such challenges.

This research project has provided an opportunity for narratives of kaitiakitanga in urban spaces to flourish from both old and young, those closely connected to urban places and those who are not. In addition, it has shed light on the urban experiences of Māori in relation to kaitiakitanga practices but furthermore, shows that our experiences of urban spaces share similarities and differences, but are largely influenced by our understanding of culture and our own experiences within nature. The research project asked two key questions:

1. How is kaitiakitanga practiced in urban Kirikiriroa?; and
2. How does mana and place influence kaitiakitanga knowledge and its application within the urban space?

To answer these two questions, I used a literature review, survey, focus groups and interviews to provide better insight into kaitiakitanga in urban places. This has produced a narrative of kaitiakitanga in urban spaces, key drivers and influences in our application and understanding of this concept. These findings have also produced recommendations to support kaitiakitanga practices in urban spaces.

8.2 Recommendations for Kaitiakitanga in Urban Spaces

Given that kaitiakitanga practices and challenges vary in urban spaces there are multiple avenues that can be taken to help remedy current challenges faced by kaitiakitanga and potentially support practices in urban areas. Considering the findings of this research project and the drivers of kaitiakitanga, Table 8.1 below presents ways to support kaitiakitanga practices of both Mana Whenua and Mātāwaka in urban spaces like Kirikiriroa. The table uses key areas to target actions and provides simple ways to support the practices of kaitiakitanga in urban spaces.

Aspect	**Issue**	**Suggested aid**	**Drivers to support Kaitiakitanga in urban spaces**	**Action**
Place	Lack of appropriate space; Limited place connection	Places for kaitiakitanga practices; Support for Mātāwaka	Using ideas of whakapapa and practices to grow relationships to place, we can draw on local narratives to help participants build relationships to the urban space e.g. information about the whakapapa of rongoā practices related to locale, harvesting practices and other relevant cultural practices used in traditional and modern times in urban spaces like Kirikiriroa.	Plan for urban spaces to include areas for kaitiakitanga practices e.g. rongoā gardens, harakeke patches, mārā hūpara, community gardens. Identify areas where frequent cultural practices were historically undertaken. Restore these areas and the practices associated to them. Encourage more narratives of local hapū in urban spaces through whakairo, information boards, playgrounds and parks.

Culture	Limited understanding of hapū protocols; Limited understanding of appropriate practices	Hapū led restoration projects; Recognition of important urban sites; Recognition of kaitiaki; Urban resources; Practices related to hapū	Draw from local narratives of practice and obligation to build a better understanding of local tikanga and appropriate practices with nature.	Encourage and initiate hapū led restoration in urban spaces. Identify sites of significance - work with hapū to scope potential use/access in urban spaces. Identify traditional cultural practices related to urban resources and places- use information boards to highlight these practices and provide areas for practices to take place. Re-establish cultural resources in urban spaces like medicinal plants and food sources. Restore and share stories of local kaitiaki through information boards, community events and whakairo
People	Need for increased relationships to local hapū; Limited knowledge about rural and urban relationships and influence on practices	Support Mana Whenua in nature retention; Urban and rural relationships	Using Mana Whenua obligation to space to highlight importance of nature spaces in urban areas. Understand Mātāwaka obligations to rural and urban areas to create better engagement between these two spaces.	Events to share local knowledge, Projects to understand relationships between rural and urban places using kaitiakitanga as a connecting factor. Highlight similarities in practices and resources. Create spaces where similar resources can be used.

Nature	Limited nature aspects in urban spaces; Lack of engagement with diverse (endemic) species	Kaitiakitanga restoration projects; Spaces for resource use; More narratives of traditional nature practices around food, medicine, arts	Drawing on ideas of whakapapa, culture, relationships, and practice to create engagement initiatives with nature. Reinvigorate stories of engagement with endemic species. Reconsider public green spaces and their functions.	Introduce more endemic species into urban spaces, parks and recreational spaces More engagement with other forms of nature - i.e Waikato river and the species that live in the river. Using green spaces to introduce new species to urban people. Share narratives about species important to local hapū through educational programmes. Grow recognition of local hapū kaitiaki through restoration projects and educational opportunities.
Mobility	Limited mobility for older participants; Participants travelling between urban space	Supporting connection to local hapū; Supporting transportation to sites of significance	Concepts of whakapapa, practices with nature can be used to increase mobility amongst highly dense nature areas of urban spaces. Age appropriate practices can also be developed as well as ways to connect varying ages groups to nature areas.	Identify areas in urban spaces for nature practices. Create sections where practices can be undertaken. Increase nature corridors, create nature pockets throughout the city. Create age appropriate areas for practices with nature (gardens, places for weaving, rongoā collection).

Access	Limited access to resources Limited access to knowledge and sites of significance	Access to resources; Access to knowledge; Sites of significance	Relationships, culture, and whakapapa should be used to create ways for different peoples to access nature. This should include age and ability as keys areas for consideration.	Plan for urban areas to include accessible nature areas. Create age targeted green spaces to increase engagement with nature. Also consider ways to increase nature access for all people. Create accessible sites for varying age groups, mobility levels throughout urban spaces to increase access for all.

Table 8.1 - Supporting kaitiakitanga in urban spaces

This table highlights recommendations to support kaitiakitanga in urban spaces. Highlighted in this table are the drivers and actions that can be used to address current challenges expressed by participants of this research project. These recommendations further draw on the key drivers of kaitiakitanga to shape appropriate actions to support kaitiakitanga practices in urban spaces.

8.3 Limitations of the Research

There were limitations in this research that occurred in different stages of the research project. For this reason, these limitations are outlined here as areas for future researchers to consider should they try to undertake a similar project.

8.3.1 Survey

The survey had a low sample size, therefore the results cannot be attributed to represent a wider portion of the population. For this research, the survey provides a general perspective of kaitiakitanga experiences in the urban space. There were also differing response rates for age groups in the survey. For this reason there were low numbers from participants aged over 55, therefore a more targeted approach to gather perspectives from this group is needed. This is also the rationale for

undertaking the second focus group that targeted kaumātua. Issues also arose with the use of Qualtrics for the survey which included an automated logic step that was not picked up in initial testing. This resulted in one question being unusable and not reported in the survey data.

8.3.2 Recruitment of Participants

The focus group participants varied in numbers with the second focus group only having four participants. Other potential participants were approached to be part of this focus group but they did not respond to the invite. Therefore, better recruitment approaches are needed to ensure more voices are included in research similar to this project. Although the overall aim of this research was to engage with Māori people who live within an urban space, the project also gathered perspectives from non-Māori who were also present in the survey and focus groups. This does not influence the results of the research but shows that non-Māori are also engaging and learning about kaitiakitanga. More focus and strict criteria can be applied to participant selection for future research projects.

8.3.3 Mātāwaka and Mana Whenua

There was a large portion of the participants who were of Mātāwaka descent. This has contributed immensely to the findings of this research. Future research projects should look to understand kaitiakitanga in urban spaces that engages solely with Mana Whenua as this would provide a new lens to understand more deeply how Mana Whenua practice their role as kaitiaki in urban spaces.

8.4 Areas for future research

There were many new areas for future research that surfaced in this research project. Although these sit outside of the scope of this particular research project they still played a role in helping to articulate the way that kaitiakitanga is interpreted and

practiced in the urban space. What these emerging areas of future research highlight is the developing nature of kaitiakitanga knowledge as we move in and through new spaces and contexts.

8.4.1 Kaitiakitanga and Water

There was a recognition by participants about the relationship between waterbodies and kaitiakitanga. This area of research could delve into particular kaitiakitanga practices with water and more pressing, the role of spirituality in articulating such practices with waterbodies.

8.4.2 Gender

The relationship between kaitiakitanga and gender is an area that requires further exploration. The research data shows that there may be a relationship that exist between the practices we undertake and gender, however, more analysis of this area is required.

8.4.3 Age

The role of age in kaitiakitanga practices is an area that requires further research. There is a need to engage with specific age groups who were not present in the research project like children. These particular age groups may have varying interpretations of kaitiakitanga practices and knowledge within the urban space.

8.4.4 Rural and Urban Relationships

There was also a need to understand the relationships that may exist between rural and urban areas. This could provide more understanding about the relationship between mobility and the practices of kaitiakitanga. Although the research touched on this idea, there is opportunity to understand how the two spaces could support transient people, knowledge retention in rural communities and more importantly,

highlight the adaptation of practices through mobility.

8.4.5 Mana Whenua and Mātāwaka Kaitiakitanga Initiatives

Further research should be undertaken to build projects that support the expression of kaitiakitanga by both Mana Whenua and Mātāwaka in urban spaces. Such projects should be guided by Mana Whenua hapū and further develop opportunities for Mātāwaka and urban peoples to create meaningful practices of kaitiakitanga in urban areas. Moreover, these projects could provide opportunities to support Mana Whenua in the application of their ancestral roles as kaitiaki and allow learning opportunities for Mātāwaka about their new home spaces. Likewise, such projects could be Mātāwaka led with guidance given by Mana Whenua groups.

8.4.6 Kaitiakitanga and Different Contexts

There is a need to understand more deeply how varying contexts invoke kaitiakitanga practices. This research project has only begun to unravel the practices being undertaken in the urban space. There is still a need to examine kaitiakitanga in other areas of our society such as forest, oceans and other landscapes. There is also a need to understand how kaitiakitanga in being used in our workplaces, policy, educational institutions and more broadly, by wider society.

8.4.7 Risk to Kaitiakitanga Practices in Urban Spaces

Future research should look to explore the emerging risk faced by kaitiakitanga practices. The research shows that as more Māori move through different spaces, there are changes that participants experience that challenge cultural practices in ways that are unique to that particular space. More pressing, there are growing environmental and social issues that may also hinder kaitiakitanga practices like climate change. More research is required to understand these risk to kaitiakitanga practices.

8.5 Conclusion

This final chapter has shared emerging themes of the research project and how they contribute to a holistic relationship to nature, culture, people and place. The chapter shares the opportunities for future research, some of the challenges in undertaking this research project and highlights ways in which to encourage the uptake of kaitiakitanga in the urban space. There is a clear argument that kaitiakitanga is being practiced in the urban space by both Mana Whenua and Mātāwaka groups in varying ways. More interestingly, the changes that Mātāwaka apply to their practices pays homage to the respect and considerations that are being made to ensure appropriate practices of kaitiakitanga can be undertaken in the urban space outside of participants own tribal boundaries. The research project has highlighted aspects that both encourage and challenge our practices of kaitiakitanga but also the number of opportunities that exist to encourage continued practice and knowledge development. More importantly, the research has shown that there is still much to learn about kaitiakitanga in urban spaces and this requires better integration of the concept itself into not only our daily activities but also the built environment that surrounds us.

What has further surfaced is the complex web of practices and understandings of kaitiakitanga that still require more in-depth research. The research has further shared the impacts of the urban space on kaitiakitanga practices but also the opportunities to increase our connections to nature in such settings. The development of these ideas could pave ways for better practices for Māori but also for other people in understanding how we might create connections with nature in urban spaces through cultural practices and knowledge. There is an opportunity to ensure that relationships to nature can exist and be maintained through cultural concepts like kaitiakitanga. However we must seek to understand the basis for such

practices and how best to support these aspects in modern environments. In the outset of this thesis I drew on kōrero by Merata Kawharu (2010) about the use of past knowledges in guiding our actions into the future. The challenges we face in future are unknown, but we can rely on the wisdom of our ancestors and nature in guiding our practices and behaviours. This wisdom is integral for future urban dwellers to aid in their challenges for the future. It is hoped that this body of work will contribute as a guide to navigating new spaces and creating strong relationships with people, our taiao and the kaitiaki of places we call home.

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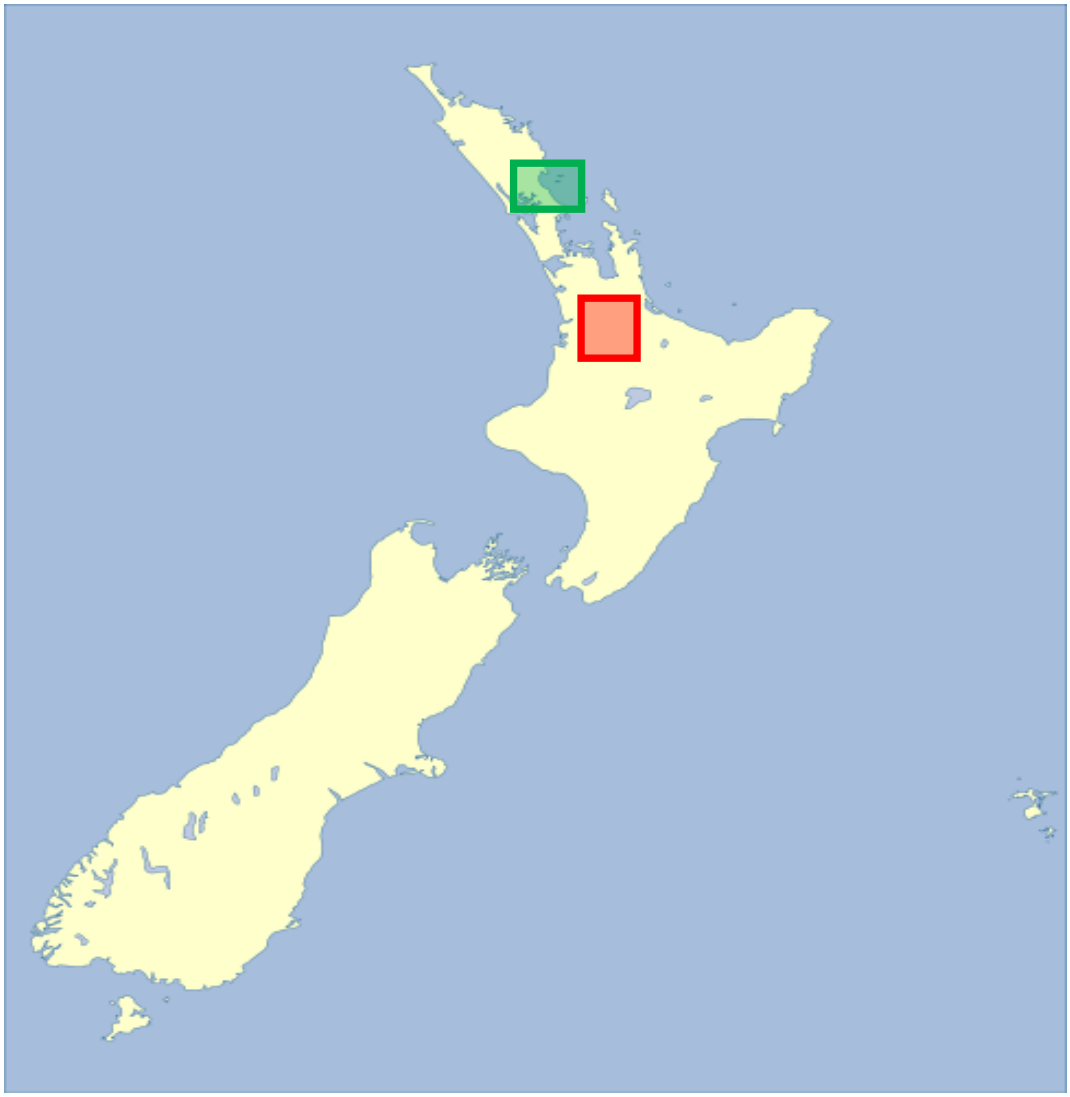
Appendices

Appendix 1



Appendix 1- Map of New Zealand (2021, January). https://upload.wikimedia.org/wikipedia/commons/e/eb/Map_of_New_Zealand_%28blank%29.svg

This map of New Zealand indicates the location of Whangārei and the location of the Waikato area. The map is used to illustrate my own migration from my homelands to a new space. The green square is indicative of my homelands of the Whangarei area and the red square is indicative of the Waikato area. These squares provide an approximate location of such spaces.

Appendix 2

Faculty of Maori & Indigenous Studies
Te Pua Wānanga ki te Ao
The University of Waikato
Private Bag 3105
Hamilton, New Zealand

Associate Professor Maui Hudson
Phone +64 7 838 4028
maui.hudson@waikato.ac.nz

Te Manu Taiko: Human Research Ethics Committee
Faculty of Māori & Indigenous Studies
Te Pua Wānanga ki te Ao

24/07/18

Ethics Approval

Tēnā koe e te manu hakahaka e whai atu ana i te whānuitanga me te rētōtanga o ngā kaupapa rangahau o te wā.

This letter is to confirm that Erana Walker has received ethical approval for the study '**Understanding the relationship of three Urban Māori communities with their surrounding environments through Kaitiakitanga and Mana Whenua**'. The ethics application was reviewed by members of Te Manu Taiko and was signed off by the chair of the committee on 24/07/18. Good luck as you embark on your research.

Kimihia, rangahaua!

Associate Professor Maui Hudson
Convener, Te Manu Taiko
Te Pua Wānanga ki te Ao
Faculty of Māori & Indigenous Studies

Appendix 3
Survey Questions

Questions with listed answers (where appropriate)	
Please choose your gender	Male, Female, Gender Fluid, Prefer not to answer
Please select your age group	16-25 26-34 35-44 45- 54 55- 64 65- 74 75+
What is your annual income	$10,000 - $19,000 $20,000 - $29,000 $30,000 - $39,000 $40,000 - $49,000 $50,000 - $59,000 $60,000 - $69,000 $70,000 - $79,000 $80,000 - $89,000 $90,000 + I prefer not to answer
What term best describes your living identity?	Rural Māori Urban Māori Non- Māori
Do you live with Māori people?	Yes No
Please state your hapū affiliations	
Where are your hapū located?	Map activity
How confident are you to practice -	Karakia Waiata Whaikōrero Karanga Working in gardens Rongoa Mirimiri Protecting land Story telling
Where on the map did you grow up for most of your childhood? Use the pointer to select a location	
Do you live in an urban or rural area?	Urban Rural
Were you exposed to kaitiakitanga as a child?	Yes No Prefer not to answer
Please explain your answer	

Did you move from this area as a child?	Yes No
Are your family still located in this place?	Yes No
Where on the map did you move to?	
Where do you currently live?	Christchurch Nelson Wellington Gisborne New Plymouth Hamilton Auckland Whangārei Kaitaia Other
Where on the map do you currently live?	
What is the name of your suburb?	
What is your house surrounded by? Select all that apply to you	Trees Houses Farms Buildings Shops Sports fields Recreational Parks Roads Other
How long have you lived in this area?	less than a year 1-2 years 3-4 years 5-6 years 7-8 years 9-10 years 11+ years Prefer not to answer
What is your living situation?	I own my house I rent my house I live with whānau who own the house I live with whānau who rent the house I live on whānau land I live on hapū/trust land I do not live in a house Other
Do you use natural resources in your area?(Plants, waterways, land, feathers, shells)	Yes No
What natural resources do you gather?	Medicinal Plants Land based foods Water based foods

	Carving wood Other (please explain) Arts and crafts plants
How easy is it for you to gather natural resources?	Very Difficult Difficult Somewhat easy Easy Very easy
What do you know about Kaitiakitanga?	
How comfortable are you in talking about Kaitiakitanga?	Very Difficult Difficult Moderate Easy Very Easy
What words do you think help to describe Kaitiakitanga	
How did you gain this information?	Passed down from someone Read about it in a book Learnt through practice Watched others practice Kaitiakitanga Other (please explain)
Where do you practice Kaitiakitanga?	At my house Marae At a near by park I don't have a place to practice Kaitiakitanga Other - Please explain
How long do you spend each time you practice Kaitiakitanga?	Never 30 minutes a day 1 hour a day 2 hours a day half a day each week 1 day each week Always More than 2 days each week I don't know
Do any of these aspects stop you from practicing Kaitiakitanga?	Laws and policies Neighbours Space Limited knowledge Other
Does this stop you from practicing Kaitiakitanga?	Yes No
How comfortable are you in practicing Kaitiakitanga in this place?	Very Difficult Difficult Moderate Easy Very Easy
Which of these features support you to practice Kaitiakitanga?	Green Space Forest Gullies

	Rivers Lakes Ocean Animals Marae
Do you know the hapū of the area you live in?	Yes No I am a member of the local hap?
What words would you use to describe your connection to land?	
Do you engage with the local hapū of your area	Yes No No, but I am interested in meeting them
Which of these resources do you help to restore or maintain in your area?	Medicinal Plants Land based resources Sea based resources Other (please explain) None of these Fresh Water based resources
How do you contribute to this restoration & maintenance ?	Funding Labour Land use Cultural guidance Tree Planting Administration tasks Other Species protection
Do you attend any of these restoration events?	Marae Restoration events River restoration events Tribal restoration events Local Council restoration events DOC restoration events Whānau restoration events

Appendix 4
Focus group questions

Map activity

Where is home on the map

Where do you currently live

Discussion and post-it not activity

What do you know about kaitiakitanga

Do you practice Kaitiakitanga

Do you collect natural resources

How far do you travel?

What are challenges for Kaitiakitanga in urban spaces?

Appendix 5
Interview questions

Tell me about yourself and your mahi…..

Where did you grow up?

Did you practice Kaitiakitanga as a child?

Where do you currently live

What does Kaitiakitanga mean to you now?

Do you apply Kaitiakitanga here where you currently live? Where do you go to practice Kaitiakitanga?

Do you know of any historic kōrero about this rohe?

Do these stories inform or influence your application of Kaitiakitanga?

Is there a time, day or season that is ideal to practice Kaitiakitanga?

Do you apply it collectively with others or on your own?

What other cultural practices do you perform in your current location?

Do you connect to other hapū and iwi in your area? Do these connections inform or influence your application of Kaitiakitanga?

Is there anything that stops you from applying Kaitiakitanga?

Do you engage with conservation or restoration projects in your area? If not, why?

What aspects encourage you to apply Kaitiakitanga?

If you had no obstacles, how would you shape where you currently live to suit your Kaitiaki practice?

Appendix 6
Hapū list

Atihau
Ehara au i te Māori, engari nō Ngāti Upokoiri taku wahine.
Hamua
Hikihiki
Inuawai
Kai Te Ruahikihiki
Kāti Huirapa ki Puketeraki
Kāti Mamoe
Kāti Rakiamoa
Mahurehure,
Maniapoto
Moki Tuarua.
Muaūpoko
Muriwhenua
Nga Rauru
Nga Ruahuihui
Ngaati Hauaa,
Ngaati Kaiaua,
Ngaati Koroki
Ngaati Maahanga
Ngaati Maiotaki,
Ngaati Makirangi,
Ngaati Maniapoto,
Ngaati Rauhoto
Ngaati Tiipa,
Ngae te Wake
Ngāi Taharora,
Ngāi Tahu
Ngāi Tamahaua
Ngāi Tamanuhiri,
Ngāi Tamaterangi
Ngāi Tamatuhirae
Ngāi Tamawhariua
Ngāi Tara
Ngāi Tawake,
Ngāi Te Ahi
Ngāi Te Ao,
Ngāi Te Paena,
Ngāi Te Rangi
Ngāi Te Ruahikihiki
Ngāi Te Upokoiri
Ngāi Tu te Auru
Ngāi Tūāhuriri
Ngāi Tūhoe
Ngāi Tukairangi
Ngāi Tūpoto
Ngāi Tūteauru
Ngāi Tuwhiwhia
NgāiTu,
Ngāpuhi,
Ngariki Kaiputahi
Ngāti Apa ki te Ra To
Ngāti Apakura
Ngāti Awa,
Ngāti Haa
Ngāti Hari
Ngāti Hau,
Ngāti Haua
Ngāti Hauaroa
Ngāti Hē
Ngāti Hekeāwai
Ngāti Hikairo
Ngāti Hikairo ki Tongariro
Ngāti Hine
Ngāti Hinearo
Ngāti Hinekehu,
Ngāti Hinemanu,
Ngāti Hinemihi
Ngāti Hinerau
Ngāti Hineure
Ngāti Hineuru
Ngāti Horowai
Ngāti Hou Tipua
Ngāti Huia
Ngāti Huri
Ngāti ira- (te whakatohea)
Ngāti Kahu
Ngāti Kahu ki Whangaroa
Ngāti Kahungungu
Ngāti Kahungungu ki te Wairoa
Ngāti Kahungungu ki Wairarapa
Ngāti Kahunungu ki Heretaunga
Ngāti Kapumanawawhiti,
Ngāti Kawa
Ngāti Koata,
Ngāti kohuru- (te aitanga a mahaki)
Ngāti Konohi,
Ngāti Korokī
Ngāti Koroki-Kahukura,
Ngāti Korokoro
Ngāti Koura,
Ngāti Kura
Ngāti Kūrauia
Ngāti Kuri
Ngāti Mahanga,
Ngāti Mahuika,
Ngāti Mahuta
Ngāti Maika
Ngāti Makino
Ngāti Mako
Ngāti Manawa
Ngāti Maniapoto
Ngāti Manu
Ngāti Manuhiakai
Ngāti Mihi
Ngāti Miru
Ngāti Moeahu
Ngāti Moko
Ngāti Ngāhere
Ngāti Ngārongo
Ngāti Ngutu
Ngāti Pamoana
Ngāti Parakiore
Ngāti Pareraukawa
Ngāti Patumoana
Ngāti Pikiao
Ngāti Porou
Ngāti Pukaki
Ngāti Pukenga
Ngāti Rāhiri,
Ngāti Rangi,
Ngāti Ranginui
Ngāti Rangitihi
Ngāti Rārua,
Ngāti Rauhoto,
Ngāti Raukawa
Ngāti Rehia
Ngāti Rehia
Ngāti Rehua,
Ngāti Rongo
Ngāti Rongo
Ngāti Rongomai ki

Waiotaka
Ngāti Rora
Ngāti Rua
Ngāti Ruahikihiki,
Ngāti Ruakopiri
Ngāti Ruamahue
Ngāti Ruanui,
Ngāti Ruapani
Ngāti Tahu
Ngāti Takihiku,
Ngāti Tama
Ngāti Tamamutu
Ngāti Tamaoho
Ngāti Tapu
Ngāti Tauaiti
Ngāti Tautahi
Ngāti Te Paemate
Ngāti Te Tarawa
Ngāti Te Wehi
Ngāti Te Whiti
Ngāti Teao
Ngāti Tirino
Ngāti Toa
Ngāti Toa Harapaki
Ngāti Torehina
Ngāti Tuera
Ngāti Tukorehe
Ngāti Tunohopu
Ngāti Tūranga
Ngāti Turangitukua
Ngāti Turumakina
Ngāti Turumākina
Ngāti Tutemohuta
Ngāti Tuwharetoa
Ngāti Uepohatu
Ngāti Upokoiri
Ngāti Urunumia
Ngāti Waenganui.
Ngāti Wahiao
Ngāti Wai
Ngāti Waiora
Ngāti Wairere,
Ngāti Wehi Wehi,
Ngāti Whakaeke
Ngāti Whakaue
Ngāti Whakaue
Ngāti Whakaue
Ngāti Whānaunga
Ngāti Whaoa
Ngāti Whare
Ngāti Whata
Ngāti Whātua
Ngāti Whitikaupeka
Okahu
Otakou
Pahipoto
Papa, Sataua, Savaii, Western Samoa
Parihaka
Patu Koraha
Patutoka
Pikiao
Pirirakau
Popoto
Pourangahua
Puketeraki
Rangikoianake
Raukawa
Raukawa ki te Tonga
Rongomaiwahine Iwi
Rongowhakata
Ta Imi Moriori
Tainui
Taiwhakaea
Tamakaimoana
Tamariki o te kohu
Taranaki
Tauwhao
Tauwhao me Te Ngare
Te Aitanga a Hauiti
Te Aitanga a Mahaki
Te Aitanga a mate
Te Aoiti
Te Aowera,
Te Arawa
Te Ati Hau Nui A Paparangi
Te Atiawa
Te Atihaunui a Paparangi
Te Aupouri
Te Awe Mapara,
Te Hikitu (Hokianga)
Te Kapua Mātotoru
Te Kauimua
Te Kuihi
Te Mahurehure
Te Maru o Rereahu
Te Orewai
Te Paatu
Te Pahipoto
Te Parawhau
Te Rakamoa
Te Rangiita
Te Rarawa
Te Roroa
Te Roro-o-te-Rangi
Te Taou
Te Uri o Hau
Te Uri o Hikihiki
Te Uri o Hua
Te Uri Taniwha
Te Uriroroi
Te Waiariki
Te Whakatāne
Te Whakatōhea
Te Whānau a Hikarukutai
Te Whānau a Hinetapora
Te Whānau a Kahurautao
Te Whānau a Kai,
Te Whānau a Kaiaio
Te Whānau a Maru
Te Whānau a Pararaki
Te Whānau a Rakairoa
Te Whānau a Rutaia
Te Whānau a Taupara
Te Whānau a Tauwhao
Te Whānau a Te Ehutu
Te Whānau o iritekura
Te Whānau o Ruataupare
Te Whānau o Te Aotaihi,
Te Whānau-a-Apanui
Te Whānau-ā-Apanui
Te Whānau-ā-Hinerupe
Te Whānau-ā-Hunaara
Te Whānau-ā-Kahurautao
Te Whānau-ā-Rākairoa
Te Whānau-ā-Te Aopare
Te Whānau-ā-

Tūwhakairiora
Te wharapau.
Te Whatuiapiti
Te Whiu
Tearawa
Tuhoe
Tuhourangi
Tu-whaka-iri-ora
Tuwhiwhia
Uapuha
Uekaha
Uenuku
Waikato
Whai Taha
Whakaiti
Whānau Paniora
Whānau-ō-Tauwhao (Ngāi Te Rangi) Wife is Kapumanawawhiti of Ngāti Raukawa ki Te Tonga

Appendix 7
Medicinal resources

Aloe vera
Baby Fern
Comfrey
Dock Leaves
Garlic
Harakeke
Houheria
Kalakaua
Karaka
Karamu
Karengo
Kawakawa
Kawakawa For Tea / Skin Drinking
Kopakopa
Koromiko
Kowhai
Kumarahou
Lavender
Makomako
Mamaku
Manuka
Mingimingi
Miro Berries
Poroporo
Puawananga
Puha
Rewarewa
Rongoa
Rosemary
Sage
Tarata
Tataramoa
Tawhero
Thyme
Tikouka
Tupakihi

Appendix 8

Food resources

Apples,
Avocados
Beans
Beef
Beetroot
Berries
Blackberries
Broccoli
Cabbage
Carrots
Cauliflower
Coriander
Deer
Eggs
Feijoa
Fennel
Fruit
Garden
Gardens
Garlic
Grapes
Greens
Harore
Herbs
Home Kill Mutton
Home Kill Pigs
Honey
Hua Rakau
Hua Whenua
Hue
Kale
Kamo Kamo
Kanga
Kawakawa
Kouka
Kowiniwini
Kumara
Lamb
Lemon Balm
Lettuces
Lime
Mandarins
Meat
Mint
Mushrooms
Mutton
Oranges
Parsley
Peaches
Peas
Peruperu
Pigs
Pikopiko
Plums
Poaka
Poroporo
Potatoes
Puha
Pumpkin
Radish
Ruruhou
Silver Beet
Spearmint
Spinach
Spring Onions
Strawberries
Tame Pork
Tawhara
Ti Kouka
Titi
Tohetaka
Tomatoes
Venison
Watercress
Wild Pork

Appendix 9

Water based foods

Cockles
Crayfish
Eel
Fish
Inanga
Kahawai
Kanae
Karengo
Kewai
Kina
Koura
Kuku
Kutai
Oysters
Pāpaka
Paua
Pipi
Puha
Pūpū,
Scallop
Shellfish
Shrimp
Tamure
Tarakihi
Tio
Trout
Tuaki
Tuatua
Tuna
Water Cress
Wheke
Whitebait

Carving woods

Manuka
Manuka
Puriri
Rimu
Totara
totara

Appendix 10

Arts and crafts art

Dyes
Feathers
Harakeke
Houhi
Hue
Kiekie
Korari
Leaves
Mahi
Raranga
Makaweroa
Muka
Nikau
Pingao
Raupo
Shells
Sticks
Succulents
Ti Kouka
Toetoe
Toi
Tutu
Upcycling Furniture
Whitau
Willow

Other resources listed by participants

Driftwood
Eggs
Harakeke
Honey
Kokowai
Mulch
Pingao
Plastic Containers
Shells
Spring Water
Tikouka
Wai For Healing
Wood

Appendix 11

Participants resources using Māori names	*Scientific names*
Harakeke	Phormium tenax
Harore	Fungi
Houheria	Lacebark
Houhi	Hoheria populnea
Hue	Gourd plant
Inanga	Galaxias maculatus
Kahawai	Arripis Trutta
Kamokamo	Cucurbita pepe
Kanae	Mugil cephalus
Kanga	Zea mays convar
Karaka	Corynocarpus laevigatus
Karamu	Coprosma robusta
Karengo	Pyropia sp
Kawakawa	Piper excelsum
Kewai	Paranephrops planifrons
Kiekie	Freycinetia banksia
Kina	Evechinus chloroticus
Kokowai	Oligosoma kokowai
Kopakopa	Plantego major
Korari	Phoemium tenax
Koromiko	Hebe salicifolia
Koura	Paranephrops planifrons
Kowhai	Sophora microphylla
Kowiniwini	Solanum tuberosum spp
Kuku	Perna canaliculus
Kumara	Ipomoea batatas
Kumarahou	Pomederris kumaraho
Kutai	Perna canaliculus
Makaweroa	Phormium tenax
Makomako	Aristotelia serrata
Mamaku	Cyathea medullaris
Manuka	Leptospermum scoparium
Mingimingi	Coprosma propinqua
Miro Berries	Prumnopitys ferruginea
Muka	Phormium tenax
Nikau	Rhopalostylis sapida
Pāpaka	Hemigrapsus sexdentatus
Paua	Haliotis iris
Peruperu	Solanum tuberosum subsp.
Pikopiko	Polystichum richardii
Pingao	Desmeschoenus spriralis
Pipi	Paphies australis
Poaka	Stercorarius parasiticus
Poroporo	Solanum aviculare

Puawananga	Clematis paniculate
Puha	Sonchus oleraceus
Pūpū,	Alcithoe arabica
Puriri	Vitex lucens
Raupo	Typha orientalis
Rewarewa	Knightia excelsa
Rimu	Dacrydium cupressinum
Ruruhou	Brassica napus
Tamure	Pagrus auratus
Tarakihi	Nemadactylus macropterus
Tarata	Pittosporum eugenioides
Tataramoa	Rubus cissoids
Tawhara	Freycinetia banksia
Tawhero	Weinmannia sylvicola
Ti Kouka	Cordyline australis
Tio	Saccostrea glomerata
Titi	Puffinus griseus
Toetoe	Austroderia toetoe
Tohetaka	Taraxacum magellanicum
Totara	Podocarpus totara
Tuangi, Tuaki	Austrovenus stutchburyi
Tuatua	Phaphies subtriangulata
Tuna	Genus thunnus
Tupakihi/Tutu	Coriaria aborea
Wheke	Pinnoctopus cordiformis
Whitau	Phormium tenax